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THE NEWSPAPER FOR
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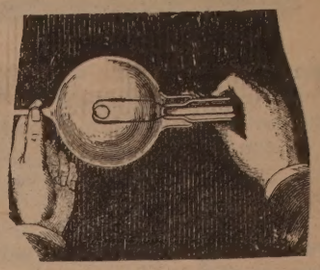
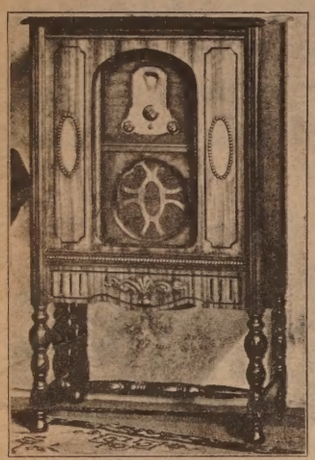
THE HORN SPEAKER



Thomas Edison's
incandescent lamp
1879-1979

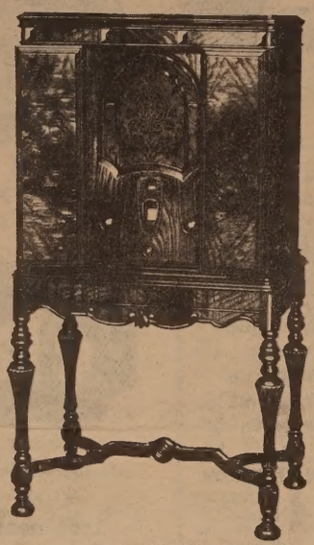
RADIO FOR APRIL, 1930

The Eye Appeal *of Some Sets*



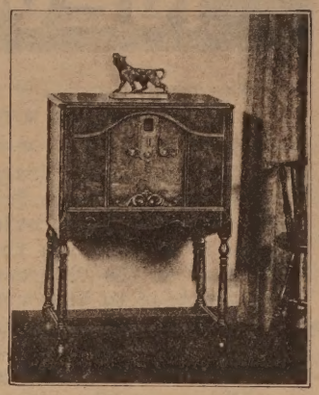
Oxford Hepplewhite, No. 41, Model of Stewart-Warner Radio

The new models of Stewart-Warner radio receivers are featured in cabinets of Early English period design. The Oxford No. 41, illustrated herewith, is an adaptation of an original Hepplewhite design and relies for its charm upon the exquisite graining of the woods used and the simple conventional ornamentation. It stands 43 inches high and retails at $150, less tubes. Other models in the 1930 series whose fine cabinet work was produced by the Louis Hanson Co. of Chicago are the Woodstock, which expresses the hardy craftsmanship of Early England, the Tremont console cabinet which is characteristic of early Colonial furniture, and a seventeenth-century English console.



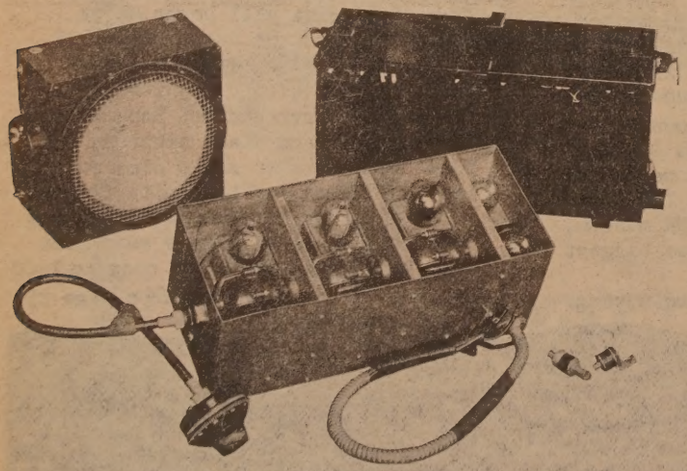
Fada Model 40

This new a-c screen-grid receiver with electro-dynamic speaker is encased in a Gothic walnut console of the French Renaissance period. The pilasters and the inside of the quarter French doors are lined with matched butt walnut and the overlays are of burl maple. The station-finder and indicator is automatically illuminated as the tuning dial is turned to show the call letters of logged stations. Tone character is adjustable to suit individual taste.



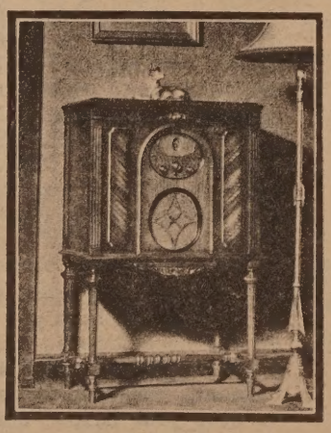
Gulbranson Model 9950

The eye appeal of this set is enhanced by a pocketbook appeal of $99.50 for a lowboy cabinet 36 inches high which houses a nine-tube chassis and electro-dynamic speaker whose sound is delivered from the bottom of the cabinet. The chassis has screen-grid tubes in the r-f stages, power detection, and push-pull audio.



Delco Automotive Radio Ready for Installation

Cadillac Instrument Panel With Radio Control at Right



Silver Model 60 B Lowboy

This open-face cabinet houses one of six new moderately priced models whose appeal is primarily to the ear rather than the eye, though the latter is not lacking. They are designed to have great sensitivity and selectivity with a short aerial.

The eye appeal of the Delco automotive radio depends upon the fact that the set is concealed beneath the car's cowl, the batteries in a metal box under the floor-boards, and the antenna in the top of the car, so that the tuning dial, volume control and key switch on the instrument board are the only radio devices in sight. Even the cone speaker is mounted on the dash, out of sight, as are likewise the resistors and condensers that prevent interference from the ignition system.

SPANISH furniture, because of its outstanding characteristics, especially in cabinets, has considerable decorative merit and it enjoys wide popularity in this country. A cabinet in the Spanish design invariably has the appearance of a box on a stand, or to use the more technical term, on a trestle. The lines are usually straight, and the piece gives the impression of ruggedness and strength.

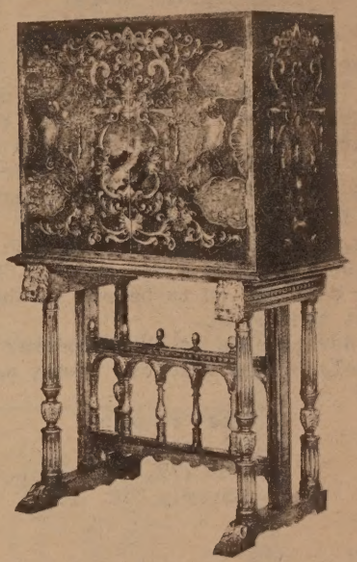


Fig. 2. Spanish Renaissance Cabinet Showing Moorish Influence

The cabinet in Fig. 2, though of domestic make, is a development of the Spanish "Vargueno," or chest on stand, and is typical. The stand always has several legs at each end, joined by an arched colonnade or stretcher, as in the illustration, or it may rest on single supports, splayed outward at each end and connected by a wrought iron brace. The upper case may be carved, it may be covered in stamped leather, or it may be hand-painted as in the illustrated model, but the general effect is always the same.

The Moorish element is an important influence in Spanish furniture. They were Mohammedans who invaded Spain in 711 and their great skill in iron and leather work accounts for the tendency to adorn Spanish cabinets with beautiful

(continued on page 6

letters

Dear Jim:
Enclosed find check for $5.50 for another years subscription.
I don't have anything ready to sell just now so will have to wait to send in an ad.
Your paper continues to show improvement with lots of good ads. Keep up the good work, please.

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73,
Bill Hemrick
Route 1, Box 93A
Terra Alta,
West Virginia 26764

Dear Jim:
Thank you for the reminder on my subscription. I look forward to every issue. I also thank you for all of your hard work in preparing and getting out the "Horn Speaker".
I have enclosed a check for $24.00 to cover my subscription @ 10.00 for first class and $14.00 for the enclosed ad to be run in the next ten issues.
Advertising in "Horn Speaker" surely brings results, thanks again and

Best regards,
Al Warren
Box 279, Church St.
Waverly PA 18471

Sir:
Enclosed is a check for $5.50 for a one year subscription to THE HORN SPEAKER. Out of all the publications that deal with Antique Radio (that I've seen) yours is by far the best.

Thank you,
Harold P. Keogh
513 Fox Chase Dr.
Arnold MO 63010

FIND

The Houston collectors are working hard to unearth old sets in the fertile grounds of the Houston area. For instance, Frank Cooper has recently acquired a model 5 Atwater Kent radio, a very rare one. The Houston collectors seem to be digging a lot in the San Antonio area. There must be something there or at least clues of a major "find".

MUSEUM NEWS

THE TEXAS BROADCAST MUSEUM, INC.
PROGRESS NOTES
Actual report from Billy Bragg

The William I. Bragg family has organized the Texas Broadcast Museum, a non profit corporation. Their purpose is to preserve the exciting history of the broadcast industry. In addition to broadcasting, T.B.M. will be a technology museum, something that does not now exist in this area. But most important, we will be a people museum. There will always be buttons to push, sights to see, and sounds to hear. A visit to our Audio/Video consoles, will allow persons to pretend they are a NETWORK DIRECTOR, producing their own LIVE show. For the history buff, there will be great programs to view, from Broadcasting's golden past.

In cash, services, pledges, and old equipment, THE TEXAS BROADCAST MUSEUM has raised $52,723.20. Our exhibits begin with a replica of Edison's 1879 light bulb, and include radio station WRR's 1940's Transmitter. The museum is now negotiating for the entire 1930 master control room of a south Texas Radio station. Our store room is litterly running over with Edison phonographs and antique broadcast equipment.

We hope to have our Grand Opening in the near future, and our next news letter will include the IRS TAX-FREE number. Because, we are YOUR museum, we need your help. Our three biggest needs include:

1. A building to house the museum.
2. A storage area large enough to store our donations. We expect to store five (5) truck loads of equipment before opening.
3. Cash. So far, we have collected $185.00.

We want to locate the museum in the best possible place in the Dallas/Ft. Worth area, and your suggestions are always welcomed. If you have any questions, please call AC/214/690-3636.

Look at all the "breadboard" radios in one place. Photo is from Ralph Muchow's Museum in Elgin, Illinois.

club news

HOUSTON VINTAGE RADIO ASSOCIATION

With 35 members present at the last meeting HVRA re-elected Frank Cooper, president; Fenton Wood re-elected vice president; treasurer is Bill Werzner; new secretary is George Maczali and the historian is Jerry Wallick.

MAJOR ARMSTRONG MEET

The Niagra Frontier Wireless Association and the Antique Radio Club of America will honor Major Edwin Armstrong on August 25, 1979.

On the evening before the meet there is scheduled a hospitality evening at Larry and Dot Babcock's, 8095 Centre Lane, East Amhurst, New York. A chance to see a nice collection, relax and talk with friends.

On Saturday between 10:00 a.m and 1:00 p.m. there will be a swap meet and flea market. And from noon to 1:00

(continued on page 25)

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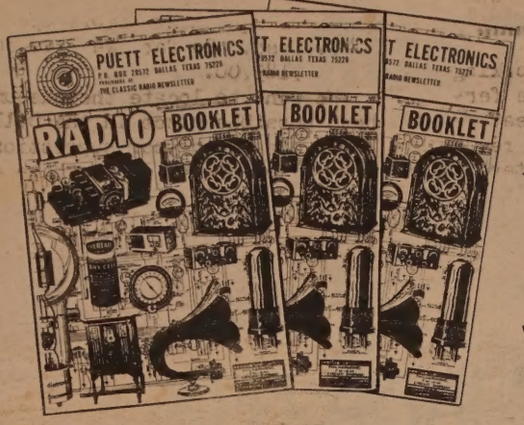

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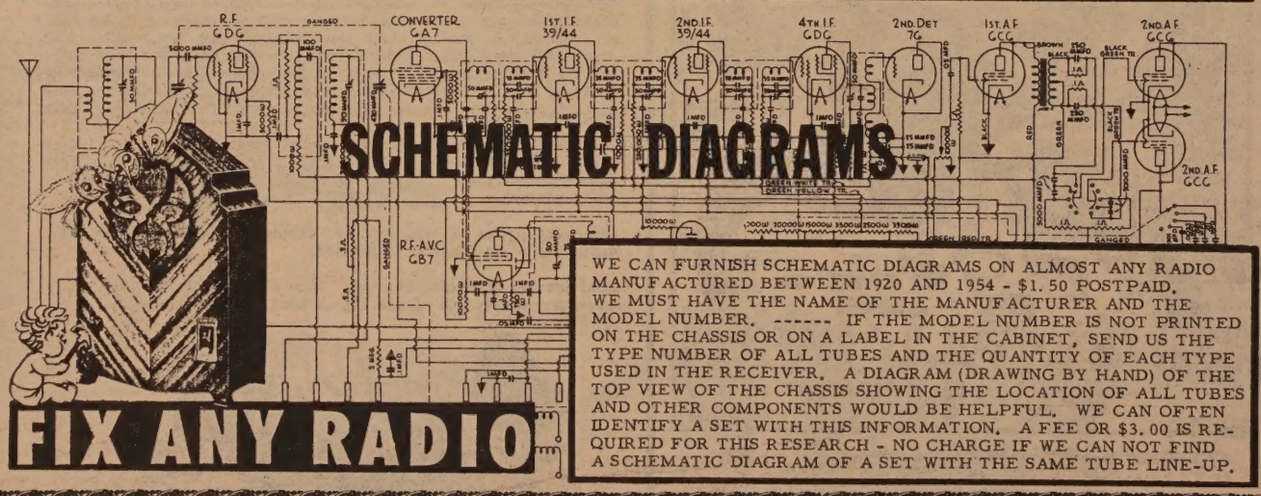

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It is our pleasure to be able to continue ANTIQUE RADIO TOPICS which was founded in 1970 by an all time great in our hobby, James A. Fred. We look forward to bringing you the nostalgia of the golden age of radio with each issue!

We have combined our two publications, THE CLASSIC RADIO NEWSLETTER (founded in 1975 by J.W.F. Puett) and THE ANTIQUE RADIO NEW ACQUISITIONS LIST with Antique Radio Topics. This means that you can receive all three at the 1979 subscription rate of only five dollars. Antique Radio Topics is published ten times per year and covers the entire world of antique radio. The Classic Radio Newsletter is devoted to receivers manufactured by The E.H. Scott Radio Laboratories, McMurdo Silver, Inc. and other manufacturers of the world's finest radios.

THE ANTIQUE RADIO NEW ACQUISITIONS LIST is published in Antique Radio Topics when PUETT ELECTRONICS has one-at-a-time or limited-stock items to sell which can not be stocked in quantity. Subscribers copies are mailed one week before copies are released to non-subscribers. Some items sold through the New Acquisitions List are rare tubes (01A, 99, WD-11); test instruments & tube checkers, old out-of-print radio books, Rider and Sams manuals, special tubes for tube collectors, and other hard-to-get items which can not be obtained in quantity.

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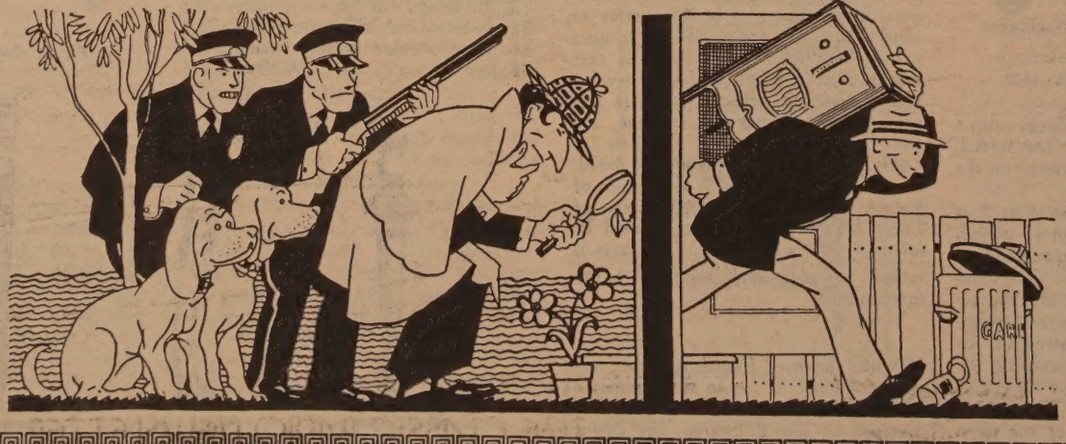


stamped leather, wrought iron handles, key plates, corner plates and stretchers between the supports. Note the hand wrought iron hinges and door pulls in the illustration. In many of the originals, the lion head ornaments conceal secret drawers.

At this point, it might be well to discuss a qualifying term which should be applied to the period designation of the cabinet which is illustrated in Fig. 3. The period of the cabinet in Fig. 2 should really be designated as "Spanish Renaissance," and the cabinet in Fig. 3 as "Italian Renaissance." The term "Renaissance" after a period simply indicates an elaboration of the preceding era.

WITH the advent of the "Renaissance Period" in Europe, home life became less formal, the lower classes acquired more of the comforts of life, and the furniture of the period expresses this new spirit of humanism. Styles in furniture became more ornate, the human figure acquired a new significance, and so, when we designate a design as Spanish or Italian Renaissance, we mean that the piece of furniture in its simpler form would be of Spanish or Italian design. The elaborations, which include the scroll carvings, the carved human motifs, claw feet, hoof feet, or supports which terminate in some human or animal form are the details on a piece of furniture which qualify the additional term.

All Italian cabinets are a variation of the Italian credenza in some form. A credenza or "Credence," as it is sometimes called, is an early Italian cabinet comparable to our present sideboard but without legs, resting only on feet. They were used for carving meats or displaying plates. The term credence is prob-

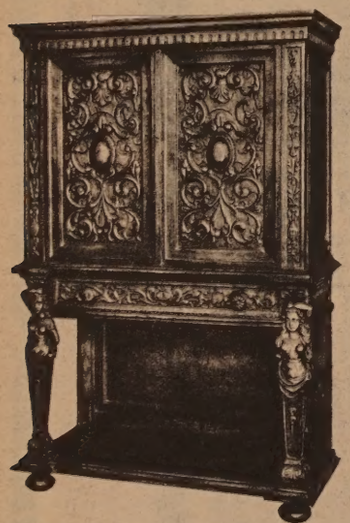


Fig. 3. Cabinet of Italian Renaissance Design

ably a derivation of the medieval custom of blessing the food before it was served. The platters of food were rested on the cabinet for this purpose.

The cabinet illustrated in Fig. 3 is Italian Renaissance in design or period. While the form itself is simple, the first impression suggests grandeur. The lines are generally straight, and the appearance of the cabinet again gives the impression of ruggedness and strength. In the cabinet which we are discussing, the flat surfaces were relieved by the scroll carvings, or, we might say, Renaissance carvings, and the elegance of the piece was further enhanced by using the human figures for the leg supports.

UP TO this point, the suggestion to look at the feet of a piece of furniture for the surest period designation

Fig. 4. Cabinet of Louis XV Period

has hardly been of much use. This is accounted for by the fact that our first three subjects each represent a very early period. Prior to the inception of these periods, practically all furniture had been immovable. In many cases, the furniture was part of the room. Seats were solid benches built into the wall, tables were built up from the floor, and cabinets or other articles were so large and heavy as to be practically immovable.

In time, however, and particularly with the advent of the Renaissance era, the decorative possibilities of furniture were developed. Furniture began to take form. This is more easily explained by noting the difference in the lower structure of the Gothic, Italian and Spanish cabinet. The Gothic cabinet is a representative of the earliest period. Note that the back of the cabinet is built almost to the floor, with aprons on the front and sides. The Italian cabinet has only the back panel, and the Spanish cabinet has no skirt, resting only on legs. Plenty of them, to be sure; nevertheless, the upper case is clear of the floor. Cabinets of the later periods are clear of the floor, and are supported in the normal manner by four legs.

Louis XV furniture is easily recognized by the carved cabriole leg, this type of leg swelling outward at the knee and inward at the ankle, but unlike the plain leg of the Queen Anne period, it is delicate and ornately carved. The legs usually terminate in scroll feet either flush with the floor, or on short raised cylindrical bases. The entire contour of the piece is generally designed in graceful curves, though this is not necessarily an absolute rule. Surfaces are elaborately ornamented in scroll carvings, in paintings, or in an overlay of veneers in which the motifs are brought out in high relief by an inlay of rare woods which, when polished, develop their individual high color. There is a profusion of ornament everywhere, and one of the outstanding qualities of Louis XV furniture is the artistic detail. Furniture of this period is a reflection of French Court life during the reign of Louis XV which was characterized by splendor, ease and luxury. The style is rather feminine and suggests dainty surroundings.

SINCE imported French furniture most commonly in use in this country is of the veneered type, we will use, for the purpose of our discussion, the cabinet illustrated in Fig. 4. This cabinet is a development of a Louis XV satinwood commode with a marble top. Such commodes are generally of console height, the size varying in accordance with the purpose for which they were intended. By making a two-door compartment instead of the usual drawers, and by adding the upper case, we have a perfect adaptation for housing a radio set and loud speaker, a radio-phonograph combination, or a combination of either with ample room for the storage of music rolls. The center drawer is sufficiently large for holding sheet music. Add to this the motif in the inlaid design, and we have a perfect piece of furniture for the music room; every necessary utility feature, and in true period design.

The veneers used are a combination of satinwood and rosewood, with burled ash panels on the lower door and drawer fronts. The inlaid motifs are made up of rare woods too numerous to detail. The trimmings are hand chased bronze mounts which are called ormolu mounts, and are distinctly a feature of French furniture. They are applied to represent the carvings if the piece were carved instead of veneered. The top is finished with a marble slab which is another prominent feature of French furniture. Note that there is a profusion of ornament on the entire surface.

THE advent of the Louis XVI period marks the next step in French furniture design. Unlike the furniture of the earlier period, it represents the essence of refinement. Sensible lines, graceful proportions, and chaste ornament are the outstanding qualities. The legs are straight, generally round, but always tapered and fluted. The cabinet illustrated in Fig. 5 is a good example. Note the delicacy of line, the stately proportions, and the refinement of the carving. The rope carving on the edge of the upper case is a distinct feature in Louis XVI furniture. While considerable French furniture of this period is veneered, the more proper form of expression is in carved walnut or mahogany.

The model in the illustration is made of walnut and hand-carved. The two-door compartment is large enough to house most radio or phono-radio combinations now on the market. The dome top is a separate compartment designed for the purpose of taking the loud speaker, with a drop lid panel in the rear, and with the carved open front for the sound to come through. For further decorative effect, a fabric is stretched across the pierced carvings. The ample room in the upper compartment permits the installation of a very efficient baffle board. Cabinets of this period add a distinct decorative touch where refinement in the setting is the object.

THERE are many periods in English furniture, but for our purposes, we have selected only the two periods which are most popular in this country, the "Queen Anne" and "William and

Fig. 5. A Louis XVI Model

Mary" designs. English-made reproductions of both periods are rather scarce and comparatively expensive. Besides, furniture of these periods can so easily be made by machine that we very often find the designs incorporated in radio cabinet models put out by domestic manufacturers.

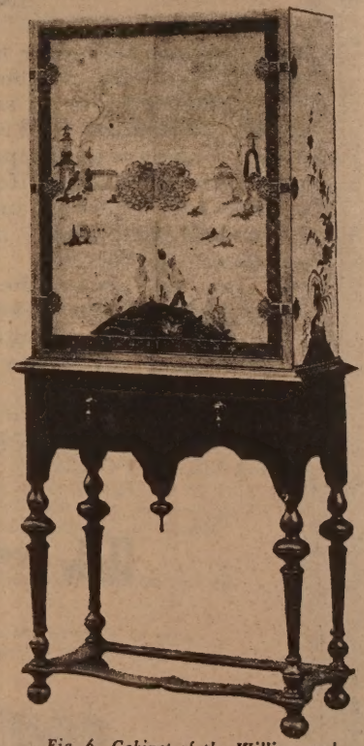
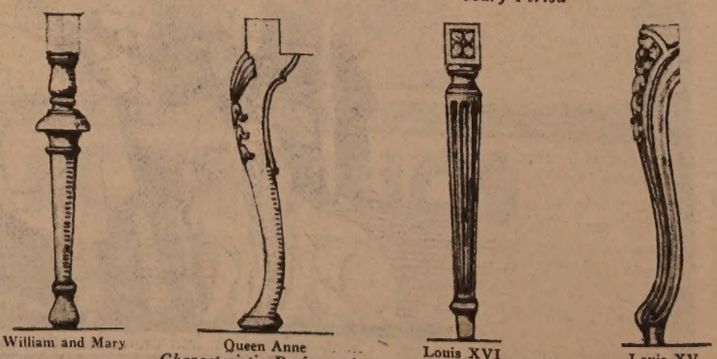


Fig. 6. Cabinet of the William and Mary Period

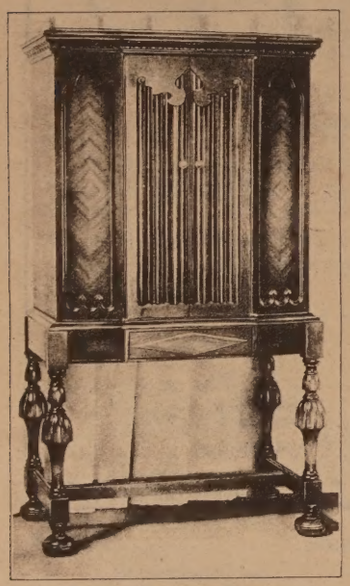


William and Mary — Queen Anne — Louis XVI — Louis XV

Characteristic Designs of Legs in Period Furniture

It is natural that as long as these cabinets had to be in sight, people would try to make them as beautiful as possible, using the materials available at the particular age. Not alone for beauty, but to impress others with the wealth of the owner, more and more elaborate and expensive became the decorations and shapes of these various types of cabinets.

Therein lies the nub of this question of style even today. Certain things are beautiful and produce a pleasing effect on everyone who sees. Other things are less beautiful or even ugly and jar on the nerves of everyone who sees. When modern furniture (and radio cabinets) incorporate in their shape and design details, whatever has proven over long ages to be pleasing to many people, and does not include design details of different periods which have been dropped because people did not like them, then that piece of furniture or radio cabinet sells to many people who like it whether or no they know why they like it.



Radio in Elizabethan Cabinet

FURNITURE design styles from 1000 A. D. up to about the year 1700 were usually dictated by some king with a taste for the beautiful or by some duchess in court favor, pieces being executed according to their ideas. From about 1700 to the present day, furniture styles have been more or less dictated by the ideas of some outstanding artist or architect from whom the style has taken its name. Much bad decoration existed in the early days and still continues to be made for no other reason than that "it is different." But without something fundamentally sound in its design it does not live and establish something permanent in style, but is only a passing fad or fancy. Good decoration will continue to exist for ages and be copied over and over again and incorporated in good furniture, just as good classical music and good books will always be played and read over and over for years to come. All old furniture is not beautiful, some of it is quaint, some of it clumsy and useless and out of place in any room today.

When a radio cabinet incorporates those features of shape and design that have pleased people throughout the ages, and does not include those things which people have not liked, then that cabinet can be readily sold. People will like it whether or not they know why they like it.

The milestones that have marked these changes of styles are the historical periods giving names to the styles of decorations which have persisted. They are: Gothic, year 1100 to 1700; Italian Renaissance 1400 to 1643; Spanish 1700 to 1900; Dutch and Flemish 1300 to 1700; French Renaissance 1500 to 1643; Louis XIV 1643 to 1715; Louis XV 1715 to 1774; Louis XVI 1774 to 1793; Directoire and Consultant 1795 to 1804; Empire 1804 to 1815; French Provincial 1200 to 1800; Tudor 1554 to 1558; Elizabeth 1558 to 1603;

Jacobean 1603 to 1689; William and Mary 1689 to 1702; Queen Anne and Early Georgian 1702 to 1749; Chippendale 1749 to 1792; Adam (brothers) 1758 to 1792; Hepplewhite 1750 to 1800; Sheraton 1790 to 1810; American Colonial 1630 to 1790; American Federal 1790 to 1825; American Victorian 1800 to 1900; American Mission 1890 to 1915; Art Nouveau 1915; Modernistic 1920.

There is no sharp dividing line between each of these periods. They overlap, some of the features of one merging into another as years pass. The good out of each has lived and continues to be the basis for good design details to this day.

It is not a difficult task to learn some of the more distinguishing features of each of the periods from which good present day designs are made. When the radio salesman is not sure of his ability to describe and talk about a cabinet, he should take a picture of it to some good interior decorator or furniture man and have him explain its distinguishing factors. For the salesman who desires to improve his knowledge of this important part of his job, reference to such books as "The Period Furniture Handboook" by Mr. and Mrs. G. Glen Gould; "The History of Decorative Furniture," by Edwin Foley, or "Style in Furniture" by R. Davis Benn will be interesting and instructive. What the radio salesman can get out of this is a superficial knowledge for conversation at least. Some of the high spots will remain with him.

It requires no expert to discover that the Renaissant periods in Italy and France and the Elizabethan age in England produced furniture more for castles and palaces, than for apartments and bungalows. These individual massive pieces appear at their best advantage only as a part of a massive room. The elaborately overstuffed and carved, gold-finished pieces of the first two Louis would be completely thrown out of balance with many of the ordinary walnut radio cabinets available.

On the other hand, William and Mary leg turning, and the carved legs of the Queen Anne and Georgian periods are frequently adaptable and right as parts of cabinets for small rooms. Incidentally, the legs on cabinets, tables and chairs offer one of the best means for classifying furniture as to its period. Adam, because slender and practical, is another design quite popular for cabinets and tables for small rooms. As these last three periods named lend themselves to modern machine production methods, some adaptation of them is frequently seen in popular priced radio cabinets.

"PERIOD" CLASSIFICATION OF SOME OF THE NEW SETS

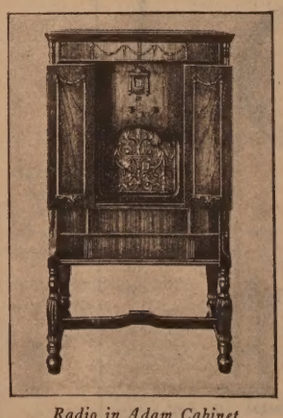
Amrad 84-C—Spanish Renaissance.
Atwater Kent 76—Tudor.
Audiola 70—Spanish Gothic.
Baldwin 90—Hepplewhite Highboy.
Brunswick 15—Composite of late Eighteenth Century.
Clarion 53—Spanish Renaissance with Early English influence.
Columbia C-20—Early English (about 1620).
Crosley Mate—English Gothic.
Edison R-7—Elizabethan, linenfold panel.
General Electric Highboy—Adam.
Lyric 19—English Gothic.
Majestic 132—Sheraton.
Philco 296—Romanesque.
Radiola 80—Jacobean Highboy with Spanish influence.
Radiola 82—Tudor Highboy.
Stromberg-Carlson 11—Modernistic Highboy with Eighteenth Century legs.
Westinghouse WR5—Elizabethan Lowboy.
Zenith 72—English Renaissance.

Spanish cabinets are mostly boxes on long legs with very distinctive ornaments of wrought iron and often with stamped leather panels, and nearly always with doors. Generally, Spanish type cabinets are so decided in character that they do not mix well with furniture of any other period.

Sheraton is always inlaid with some rare wood though easily distinguished from the elaborate inlays of many different rare woods common in Louis XV styles.

ORNAMENTATION details sometimes help to identify the period of a cabinet. Real hand carving, the most expensive, can be distinguished by little irregularities in the repetition of the same pattern, while, machine made patterns are all exactly alike. Original hand carved patterns seldom can be reproduced faithfully by moulding or machine processes because the overhang of some parts does not permit their being drawn out of a mould or through dies on a strip moulding machine. The skill with which these necessary changes are executed in the casting or dies determines the artistic value of the modern machine made ornamentation.

For some of the less intricate and smoother designs, with shallow depressions, steel dies are used and beading run through in strips twenty or more feet long. These are cut and placed on a cabinet according to the fancy of the factory designer. If the die work is poor, or the "designer" uses a style of stock-made detail on a cabinet that is not consistent with the style of the cabinet itself, a bad impression may be made on the prospect, regardless of whether the latter can point out what is wrong.



Radio in Adam Cabinet

Modern woodworking machines can, in some hands, produce rather intricate patterns of "routing," that is, slots cut into a flat surface, and these, combined with moulded wood or composition material ornaments properly chosen, can form really beautiful ornamentation, especially when full advantage is taken of the skill of good wood finishers.

Baroque and Rococo (pronounced ro kok'o) are terms frequently occurring in the conversations of artists and interior decorators. These terms are interchangeable and characterize the elaborate, often grotesque and fantastic use of scrolls, shellwork, broken lines and irregular curves used on much furniture popular in the seventeenth and eighteenth centuries. Rococo styles were carried along simultaneously in those periods with the more sedate and dignified styles equally characteristic of the same years. These liberties with the accepted designs which first characterized those particular periods were not confined to ornaments and openings

alone but were also manifested in the queerly shaped legs and main parts of furniture pieces. Whole interiors are sometimes done in the baroque or rococo styles and are quite beautiful as a whole and somewhat adaptable to small rooms, but individual pieces, though beautiful cabinets in themselves, would not be acceptable because not harmonious with popular styles of interior decoration today.

Value of Artistic Details

THE loudspeaker opening of a radio cabinet has much to do with its general appearance. Properly handled, it can add to the beauty of the cabinet and be consistent with the style of other parts of the cabinet. Openings either for ventilation or for ornamentation are found in some of the most perfect specimens of period furniture.

In some of these old period cabinets, the openings are filled in with cloth, covered with a latticed or hand-sawed or hand-carved grill. This is a practical method of treating a speaker opening in a radio cabinet if the size, and shape of the opening, the pattern of beading around the edge, or the grill work is consistent with the other parts of the cabinet. A round opening is least expensive with modern machinery and often used in cabinets in which some other shape would be more harmonious. The dies for casting round metal or wood grills are cheaper if made round.

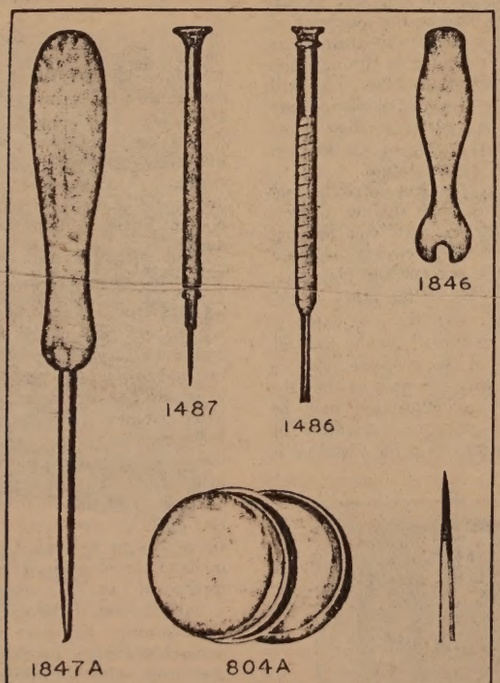
Tapestry in speaker openings may be a jarring note to many women who do not want any tapestry in some rooms, or want it to harmonize with tapestries that are already part of the decorations. While variegated colors and sometimes hand painted silk is characteristic for a particular style of cabinet, the color chosen by the factory may clash when set in some homes.

CLINIC

Repairing the Victor Exhibition Sound Box

Tools

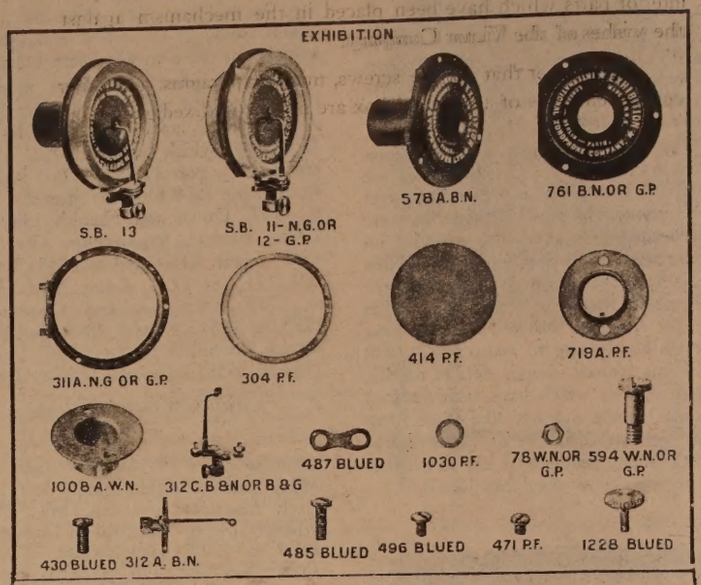
Fig. 1



	List Price
1 Waxing Iron, No. 1847A	$0.75
1 Diaphragm Piercer, No. 1487	.50
1 Jewelers' Screw-driver No. 1486	.50
1 Box Wax, No. 804A	.10
1 Adjusting Nut Wrench, No. 1846	.25
1 Camel's Hair Brush	

These repair tools (illustrated in Fig. 1) excepting the small brush, which may be purchased anywhere, will be supplied by the Victor Talking Machine Company through the Distributors.

Victor Exhibition Sound Box Parts



Part No.	Finish	List Price	Name of Part
S. B. 11	N. G.	$5.00	Sound Box (complete
S. B. 12	G. P.	7.50	" "
S. B. 13	N. G.	5.00	" "
578A	B. N.	2.50	" Back (for Straight Arm)
761BN	B. N.	1.00	" " (for Taper Arm)
761GP	G. P.	2.00	" " (for Taper Arm)
311ANG	N. G.	1.00	" Cap
311AGP	G. P.	2.50	" "
304	P. F.	.10	" Diaphragm Insulator
414	P. F.	.50	" "
719A	P. F.	1.00	" Rubber Back
594WN	W. N.	.05	" " " Screw
594GP	G. P.	.10	" " " "
485	Blued	.03	" Back Screw
312A	B. N.	1.00	" Arm
487	Blued	.10	" " Spring
496	Blued	.03	" " " Screw
485	Blued	.03	" " " "
78WN	W. N.	.05	" " Lock Nut
78GP	G. P.	.10	" " " "
1228	Blued	.05	" Needle Screw
1030	P. F.	.03	" Diaphragm Screw Washer
471	P. F.	.03	" " "
312CBN	B. & N.	1.50	" Arm (complete)
312CBG	B. & G.	1.65	" " "
1008A	W. N.	.40	" Adapter (for use on Victor Jr.)
430	Blued	.03	" " Screw (for use on Victor Jr.)

Fig. 2

Causes for Poor Results

1. Rubber insulators buckled.

2. Diaphragm not centered, causing it to touch the sound-box cap.

3. Fulcrum bearings of needle arm not set on fulcrums of sound-box cap.

4. Needle-arm foot pressing on the diaphragm.

5. Needle-arm foot pulling on the diaphragm.

6. Needle-arm foot not securely fastened to the diaphragm.

7. Adjusting or lock nuts loose.

Important Notice

In consideration of the care and attention given to the manufacture of Victor Sound-box parts, we are naturally disappointed when we find our Distributors or Dealers using repair parts on our sound boxes which have not been made and tested by our own factory.

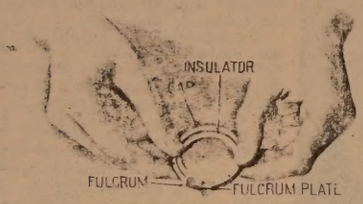
Invariably, when parts of other makes are put into our sound boxes, the efficiency of the box is lowered below the Victor Standard, and in all probability the box will fail to reproduce properly.

As a result, the Victor user becomes disgusted with what he thinks is "Victor Quality," when in reality the "Victor Quality" is all right, but it cannot overcome the handicap of inferior parts which have been placed in the mechanism against the wishes of the Victor Company.

Remember that all the screws, nuts, diaphragms, and other component parts of the sound box are made to a fixed gauge, and the possibilities all are, if parts manufactured outside the Victor factory are installed in Victor sound boxes, that they will not fit properly.

1. Place a new rubber insulator (No. 304, Fig 2) in the cap or top (No. 311A, Fig. 2) of the sound box, with the two ends of the insulator directly in the center of the sound-box cap fulcrum plate. (See Fig. 3.)

2. With the small camel's hair brush (illustrated in Fig. 1) place a little orange shellac around the top of the rubber insulator to hold the diaphragm in position.



Placing Insulator in Cap

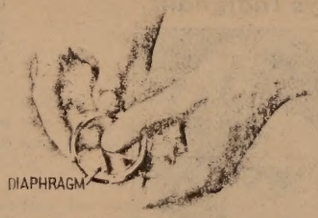
Fig. 3

3. Place the diaphragm (No. 414, Fig. 2) on the rubber insulator, making sure that the diaphragm is centered, *i. e.* clears the cap on all sides. *This is important.* Let the shellac dry—requires about one minute. (See Fig. 4.)

4. Place the second rubber insulator in position on top of diaphragm with the ends of the insulator exactly opposite the ends of the insulator under the diaphragm.

5. Place the sound box back (Nos. 761 or 578A, Fig. 2) in position, tightening the three small screws (No. 485, Fig. 2) securely in position.

6. Then place the sound box thus assembled in the left hand, with the thumb and first finger encircling the cap (see Fig. 5), and place the needle arm (No. 312C, Fig. 2) in position, being careful to see that the arm is properly set or adjusted on the fulcrums of sound-box cap. (See Fig. 5.)

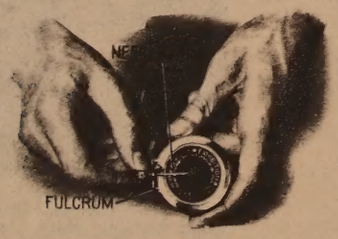


Centering Diaphragm

Fig. 4

7. With Sound-box arm in position, tighten both sound-box arm screws (No. 496, Fig. 2) sufficiently to bring the needle-arm foot flat on the diaphragm.

Careful attention should be given to this operation to see that the needle arm does not press ***tightly*** on the diaphragm or that it does not stand away from the diaphragm. For proper results the arm should barely touch the diaphragm.



Placing Needle Arm in Position

Fig. 5

This may be accomplished by tightening the lower screw to raise the arm on the diaphragm or tightening the upper screw to lower the arm on the diaphragm.

8. When screws are properly adjusted, tighten the lock-nuts (No. 78, Fig. 2); (see Fig. 6) with tool No. 1846 (see Fig. 1) to prevent the adjusting screws (No. 496, Fig. 2) from changing their positions.

9. With the sound box inverted, resting on a table or bench and held firmly in the hand, pierce the diaphragm by running a sound-box piercer (tool No. 1487, illustrated in Fig. 1) through the diaphragm at the point where the piercer will also run through the needle-arm foot. (See Fig. 7.)

10. With the sound box in the same position run a tap, using No. 00-112 standard size, through the diaphragm and needle-arm foot, tapping the diaphragm for the insertion of the diaphragm screw (No. 471, Fig. 2).

11. Place small paper washer (No. 1030, Fig. 2) on the diaphragm connection screw, and with the sound box in the same position insert the diaphragm connecting screw and tighten securely.

Adjusting Needle Arm

Fig. 6.

12. Heat the sound-box waxing iron (tool No. 1847A, illustrated in Fig. 1) over an ordinary gas jet about one minute. dip into the box of sound-box wax (No. 804A, illustrated in Fig. 1). Place the waxing iron over the sound-box needle arm foot (as illustrated in Fig. 8), and permit the wax to run off on top of the foot. Then turn the sound box over and repeat the operation by placing a drop of wax over the connection screw head. No. 471.

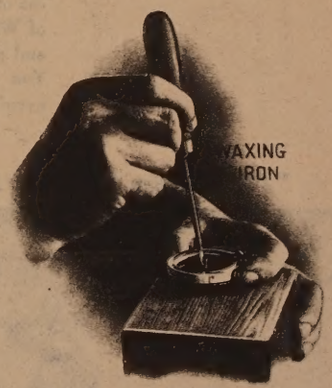
Piercing Diaphragm

Fig. 7

13. If taper arm sound box, place the rubber back (No. 719A, Fig. 2) in position.

14. Place the needle-arm thumb screw (No. 1228, Fig. 2) in arm.

15. Test carefully for proper adjustment by playing over a record with which you are familiar. If the tone of sound box is heavy, relieve the pressure on the diaphragm by slightly releasing the upper screw (No. 496, Fig. 2). It requires but half a turn sometimes to accomplish the desired results. If the sound box rattles, try tightening the upper screw slightly.



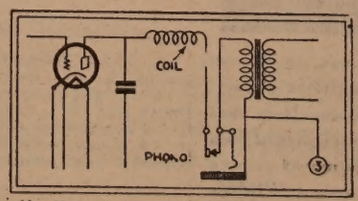
Waxing Needle Arm Connection

Fig. 8

THE OVEN TEST

By Ray R. Hayes

A BREMER-TULLY "Model 8-20A" set had been returned to the factory, and to several Service Men; and I had worked on it several times before. It would run about two hours and then shut off; there was then no detector plate current. This trouble was not experienced when the chassis was out of the cabinet; it would run perfectly under test for days. All readings were perfect. Finally, I found a fault in the plate coil; but when it was taken out, it again tested O.K.



Mr. Hayes finally convicted this Bremer-Tully plate coil of an open circuit, by baking it in the oven. Another shop need is found.

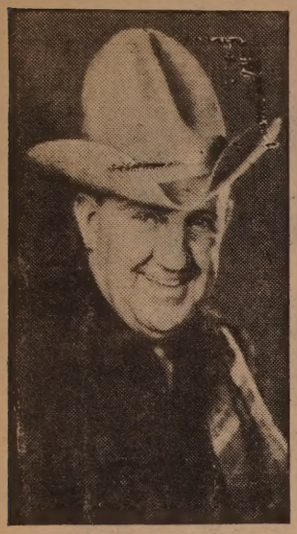
I then decided that heating caused the trouble; I placed the coil in the oven and, when it was hot, I tested again and found it open. I then discovered that the fine wire was broken in the soldered joint; when it became heated, the connection opened. I hope that no other Service Man will have as much trouble as I did to find the source of similar trouble.

on the air

WEEK ENDING NOVEMBER 1, 1934

RADIO DIAL

Oklahoma Bob



BOB ALBRIGHT

Radio's singing cowpuncher, Oklahoma Bob Albright, is no synthetic cowboy. He was born and raised in the Oklahoma cattle country, a neighbor of Will Rogers. He is heard over WLW Monday, Wednesday and Friday from 6:45 to 7 a. m. (E. S. T.) and again on Friday, 12:30 to 1 p. m., as "general factotum" of the popular Cousin Bob and his Kinfolk series.

Southern Songbird

DIXIE DALE

Here's the very latest picture of Dixie Dale, WCKY's Southern Songbird. Miss Dale first sang her distinctively styled blues songs for radio listeners four years ago when she came to WCKY. She started her radio career with Tommy Ott, now of WHBF. They were the song and piano team of Dale and Ott. You can hear Dixie Monday evenings at 7:50 p. m. (E.S.T.).

"77" Takes To The Air

Red Grange, the galloping ghost of football fame, as he was caught by the camera recently while eluding a tackler in a training session of the Chicago Bears, professional team. Note that Grange is still wearing the number 77 which distinguished him in college play. The "Wheaton Iceman," in addition to playing pro football, broadcasts the latest football news over a WBBM-Columbia network from 7:15 to 7:30 p. m., and 6:30 to 6:45 p. m. (E.S.T.) each Thursday, Friday and Saturday.

WLW, Local Outlet For Popular Sunday Afternoon Discourses

The militant priest, Father Charles E. Coughlin, returns to the air on Sunday, October 28, over twenty-eight stations throughout the country. His talks will be heard each succeeding Sunday at 4 p. m. (E. S. T.) for a period of twenty-six weeks.

Reverend Coughlin plans to devote part of the hour each Sunday to the young men and young ladies of the listening audience. The music will again be under the direction of Cyrial Guthoerl with Mrs. Armin Franz at the console of the organ.

The following is a complete list of the stations that will carry The Golden Hour of the Little Flower:

WJR	Detroit, Mich.
WOR	Newark, N. J.
WCAU	Philadelphia, Pa.
WLW	Cincinnati, O.
WOKO	Albany, N. Y.
KWK	St. Louis, Mo.
WHB	Kansas City, Mo.
KYW	Chicago, Ill.
WJJD	Chicago, Ill.
WGR	Buffalo, N. Y.
WCAO	Baltimore, Md.
WHO-WOC	Des Moines, Ia.
KSTP	Minneapolis-St. Paul, Minn.
WJAS	Pittsburgh, Pa.
WFBL	Syracuse, N. Y.
WGAR	Cleveland, O.
WOL	Washington, D. C.
WOW	Omaha, Nebr.
WNAC	Boston, Mass.
WLLH	Lowell, Mass.
WEAN	Providence, R. I.
WORC	Worcester, Mass.
WMAS	Springfield, Mass.
WICC	Bridgeport-New Haven, Conn.
WDRC	Hartford, Conn.
WLBZ	Bangor, Me.
WFEA	Manchester, N. H.
WNBH	New Bedford, Mass.

Always Indignant

Always indignant—that's Eileen Douglas who performs with Fred Allen every Wednesday night on his Town Hall Tonight broadcasts, which the Bristol-Myers Company presents over an NBC-WEAF network including WLW and WSM at 9 p. m. (E.S.T.). Away from the microphone, Miss Douglas is anything but the character she portrays. She's young, pretty, bright-eyed and thoroughly delightful.

On National Barn Dance

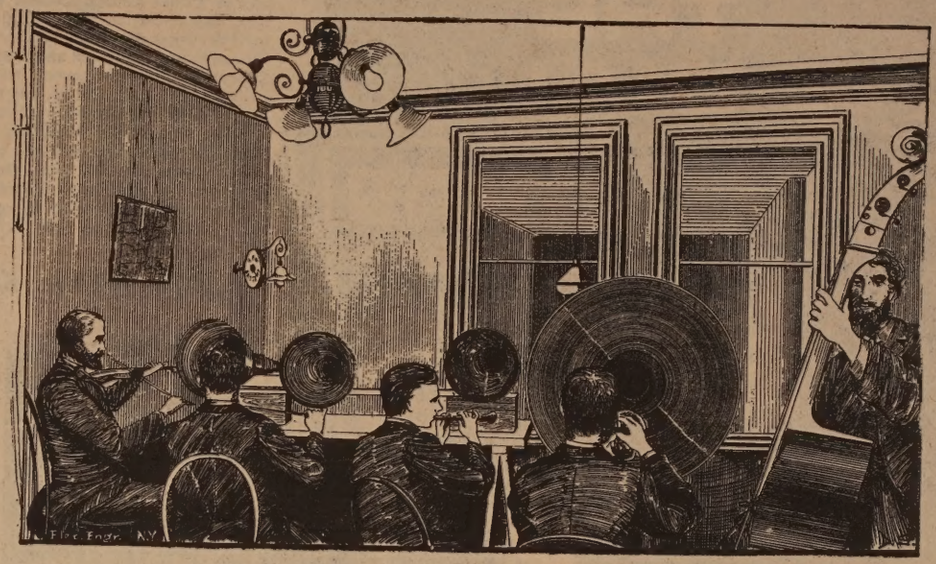
Lulu Bell's songs heard on the WLS National Barn Dance are of a special type not easily classified by music students. "Seventeen Come Sunday" and "That Little Black Moustache" indicate a memory stretching back into the faintly purple nineties which her tender years do not bear out. In a calico dress and high-top shoes, her braids falling down her back, Lulu Belle is one entertainer refreshingly different. The "straight" depicted here shows you that Lulu Belle needn't fear the coming of Old Man Television.

LONG DISTANCE TELEPHONE CONCERTS.

One of the interesting developments of telephone work is that which is now steadily going on—the transmission of orchestral music over long distances. Our readers will recall the large measure of success attained during the exhibition of the Women's Exchange at the Lenox Lyceum last winter, when, besides the transmission of music from the local theaters, Boston contributed to the entertainment by telephone, in the shape of music and recitations.

This work has been carried on by the American Telephone and Telegraph Company, known as the "Long Distance Company," under the direct supervision of their able engineer and electrician, Mr. F. E. Pickernell, and the results obtained with but a comparatively short experience in so difficult a field are exceedingly gratifying and give promise of still greater success in the near future.

In a lecture recently delivered in the Town Hall at Newton, Mass., Mr. Pickernell described the methods employed in the transmission of music by telephone. His remarks were very forcibly illustrated by the reception in the lecture hall of music transmitted over the long distance lines from the telephone building, at No. 18 Cortlandt Street, New York, and our engraving, made from a photograph taken at the time, shows the arrangement of the performers.



A LONG DISTANCE TELEPHONE CONCERT—PERFORMERS IN NEW YORK, AUDIENCE AT NEWTON MASS.

In transmitting music of this kind, it has been found desirable to have a separate transmitter for every instrument, and further, that, where a considerable number of instruments are used, it is necessary to so arrange the induction coils that their joint resistance will bear a fixed ratio to the resistance of the receiving instruments and line, all the induction coils being connected by the same line in multiple series. For this class of work the storage battery is admirably adapted for operating the transmitters, and by using cells of this type, it is possible to run 20 long distance transmitters from the same battery without drawing a current sufficiently heavy to injure the storage battery.

By using separate transmitters for each instrument, due prominence may be given to each of the instruments at the receiving end. If one transmitter is arranged to transmit music emanating from 50 instruments, it has been found that it must be so adjusted that the average result will be fair. Under these conditions, the lighter violin parts are heard but very indistinctly, while the heavier parts produce very great noise, but the purity of the sound is affected. This, of course, gives very unsatisfactory results.

At the receiving station, when it is desired to fill halls of considerable size, as many as six loud-speaking receivers are used. These are connected in multiple series, so that their joint resistance bears a definite ratio to the resistance of the transmitters. These are distributed about the hall, being usually attached to the chandeliers. On the occasion above referred to, the music transmitted from New York over a distance of 250 miles was listened to by an audience of over 1,000 persons.

When we add that similar entertainments have been given with music transmitted over a distance of no less than 460 miles it will be clear that if the same progress is made in the future as that characterized by the work of the last few months, the telephone will occupy

an important position in our future entertainment, both public and private.—*Electrical Engineer.*

Scientific American.

[FEBRUARY 28, 1891.

Band Records

IT REQUIRES much skill to make good band records. The methods employed by the Edison experts are given here for the general guidance of the amateur. The horn generally used is somewhat larger than that employed for other kinds of records. It is about forty-eight inches long and the large opening is eighteen inches in diameter.

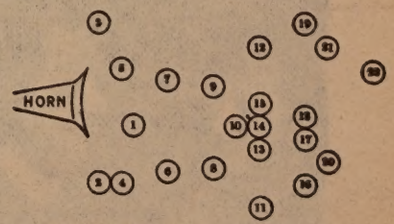


DIAGRAM SHOWING POSITIONS OF EACH INSTRUMENT IN MAKING A BAND RECORD

1. Piccolo
2. Oboe
3. E flat Clarinet
4, 5, 7. Solo Clarinets.
6. 2d Clarinet
8. 3d Clarinet
9. 1st Clarinet
10. Baritone
11. Tuba
12. Drum
13,14,15. 1st, 2d & 3d Horns
16,20. 2d & 3d Cornets
17,18. Solo Cornets
19,21. 1st & 2d Trombones
22. Bass Trombone

The horn is placed in a horizontal position about four feet from the floor, and the bass instruments, such as the tubas, are placed at a distance of three to five feet from the horn, and altos about seven feet. The trombones about eight feet and raised about two feet from the floor so that they will focus the recording horn properly. Cornets are placed between the trombones, at a distance from eight to nine feet. The piccolos have a position between two and three feet from the horn, and the clarinets are raised two or three feet from the floor and lined up in two rows, one on each side of the horn, blowing across. The snare drums are placed two or three feet away and are never allowed to play except when they have a solo part. Bass drums and cymbals should never be used, as they have a tendency to fog the record.

Kate Smith Goes to Hollywood — Part II

GLAMOURTOWN IS FUN AND ALSO WORK

WHEN KATE SMITH stepped from a streamliner in Los Angeles after a three-thousand-mile trip to preview four Paramount films on her Friday broadcasts, her first remark was, "Oh boy, sunshine!" Next day it started to rain and continued through her first week-end in Hollywood. But fun—and work—began at once. A half-hour after the party arrived, Kate and Ted were in a CBS studio rehearsing their "Noonday Chat." Afterward the "Chats" were done from Kate's suite in the Ambassador Hotel, but more urgent were preparations for the previews of Paramount's "Road to Zanzibar," "The Roundup." "I Wanted Wings" and "Reaching for the Sun," to be presented with the stars who made them as guest players on four successive Friday nights. Intermingled with the work, there were plenty of good times for Kate —visits with Hollywood friends, drives about southern California in a new roadster provided for her, rambles through the studios. Energetic Kate also found time to make several radio guest-appearances.

NEXT WEEK: Kate Goes to Catalina

KATE LUGS a large, handsomely bound autograph book, which she plants in the laps of celebrities. Already having filled one book, she brought a new one on this trip to Glamourtown. Here she gets Dottie Lamour's signature

STEPPING DOWN onto California soil, Kate finds herself surrounded by cameramen. They stayed with her for three weeks

KATE AND TED COLLINS go direct from train to CBS-KNX studios. Arriving in Hollywood at 8 a.m., they had to go on the air an hour later with their popular "Noonday Chat"

DRIVES ABOUT HOLLYWOOD and into the country, rather than night-clubbing, were Kate's favorite recreation. Here she stops at gaudy Hollywood drive-in for a light lunch

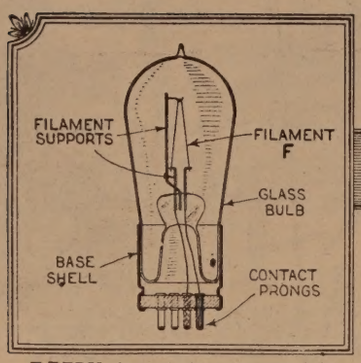
BOB HOPE, who appeared in Kate's adaptation of his Paramount comedy, "Road to Zanzibar," drafted her for a return appearance on his Tuesday show. Kate, with Bob and Jerry Colonna, above, was a great comedienne

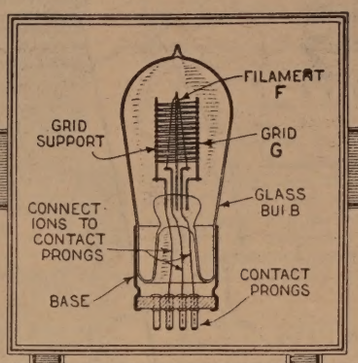
TINY STAR CAROLYN LEE guides Kate about the Paramount lot, where she watched pictures in production, visited the "Caught in the Draft" set, gathered material for her morning show, talked to stars, combined work with pleasure!

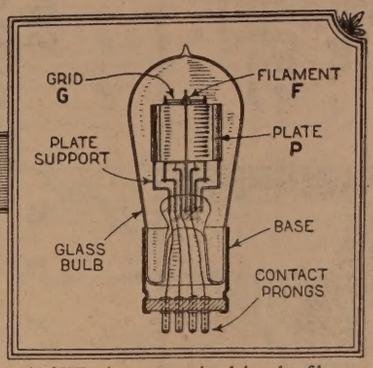
WKH	360	Montgomery, Ala.	Montgomery Light & Power Co.	KUO	360	San Francisco	Examiner Printing Co.	8YA	360	Lowa City,	University of Iowa
WOK	360	Pine Bluff, Ark.	Pine Bluff Co.	KXY	360	San Francisco	Radio Telephone Shop	KSU	360	Louisville, Ky.	Darrel A. Dorrard
KFU	360	Berkeley, Cal.	Maxwell Electric Co.	KQW	360	San Jose	Chas. D. Herrold	WOU	360	Medford Hillside, Me.	American Research & Radio Corp.
KFU	360	Berkeley, Cal.	Maxwell Electric Co.	KWG	360	Stockton	C. O. Gould	WBZ	360	Springfield	Westinghouse Elec. & Mfg. Co.
KGG	360	Hollywood	The Precision Shop	EJI	360	Stockton	Portable Wireless Telephone Co.	W7	360-485	Detroit, Mich.	The Detroit News
KLP	360	Los Altos	Electric Lighting & Supply Co.	KIZ	360	Sunnyvale	The Radio Shop	WKW	360	East Lansing, Mich.	Stuart Bentley
KFS		Los Angeles	Colin B. Kennedy Co.	WQJ	360	Denver, Colo.	Reynolds Radio Co.	WLB	360	Minneapolis, Minn.	University of Minnesota
KOG		Los Angeles	Bible Institute of Los Angeles	WCJ	360	Hartford, Conn.	C. D. Tuska Co.	WOS	485	Jefferson City, Mo.	Missouri State Marketing Bureau
KGL		San Angelos	Western Radio Electric Co.	WDM	360	New Haven,	A. C. Gilbert Co.	WOQ	360-485	Kansas City, Mo.	Western Radio Co.
KGL		Los Angeles	Leon A. Ringo	WDN	360	Washington, D. C.	Church of the Covenant	9YY	360-485	Lincoln, Neb.	University of Nebraska
KFI		Los Angeles	Western Radio Electric Co.	WIV	360	Washington, D. C.	Radio Constr. & Electric Co.	WOU	360-485	Omaha, Neb.	Metropolitan Utilities District
KGC		Los Angeles	Noble Electric Works	WWX	1100-1560	Washington, D. C.	P. O. Dept.	WOV	360	Omaha, Neb.	L. B. Howell
KLS	360	Oakland	Warner Bros.	5YM	360	Washington, D. C.	National Radio Inst.	WNO	360	Jersey City, N. J.	Jersey Journal
EZM		Oakland	Hotel Oakland	4OD	360-375	Atlanta, Ga.	Carter Electric Co.	WOR	360	Newark, N. J.	L. Bamberger and Co.
EZY		Oakland	Atlantic Pacific Radio Sup. Co.	KYW	360	Chicago, Ill.	Westinghouse Elec. & Mfg. Co.	WJZ	360	Newark, N. J.	Westinghouse Elec. & Mfg. Co.
EGB		Pasadena	J. J. Dunn Co.	WBU	360	Chicago, Ill.	City of Chicago	WDT	360	New York City, N. Y.	Ship Owners Radio Service
KGF		Pomona	Pomona Fixture and Wiring Co.	WOO	360-485	Rock Island, Ill.	Kariowa Radio Co.	WJX	360	New York City, N. Y.	DeForest Rad. T. & T. Co.
KVQ		Sacramento	J. C. Hobrecht (Sacramento Bee)	WLK	360	Indianapolis, Ind.	Hamilton Mfg. Co.	WRC	1460	New York City, N. Y.	Amateur Radio Reserve
AGI		San Francisco	Signal Corps Presidio	WOH	360	Indianapolis, Ind.	Kothoid Electric Co.	WYCB	360-485	Rochester, N. Y.	Rochester Times Union
KDN		San Francisco	Leo J. Meyberg Co.	WOZ	360-485	Richmond, Ind.	Palladium Printing Co.	WHQ	360-485	Schenectady, N. Y.	General Electric Co.
KGI		San Francisco	E. C. Lorden	WOF	360	Des Moines	Register Tribune	WGY	360	Schenectady, N. Y.	Union College
				WBL	360						

8UX	360	Akron, Ohio	Radiocraft Store	KDKA	360	Pittsburgh, Pa.	Westinghouse Elec. & Mfg. Co.
WLW	360	Cincinnati, Ohio	Crosley Mfg. Co.	KQV	360	Pittsburgh, Pa.	Doubleday Hill Elec. Co.
WMH	360-485	Cincinnati, Ohio	Precision Equip. Co.	WCAE	360	Pittsburgh, Pa.	Pittsburgh Motor Sales Co.
WHK	360	Cleveland, Ohio	Warren R. Cox	WFAA	360	Dallas, Texas	Dallas Journal
8BYV	360	Columbus, Ohio	Electrical Specialty Co.	KFC	360	Seattle, Wash.	Northern Elec. & Mfg. Co.
8YO	275	Columbus, Ohio	Ohio State University	KFQ	360	Seattle, Wash.	Louis Wasmer
WFO	360-485	Dayton, Ohio	Bike Kumler Co.	KFQ	360	Seattle, Wash.	Vincent L. Kraft
WAI	360	Dayton, Ohio	U. S. Army	WHA	360-485	Madison, Wis.	University of Wisconsin
WLS	360	Fairfield, Ohio	U. S. Army		360		
WRK	360	Hamilton, Ohio	Doron Bros. Electric Co.				
WHU	360	Toledo, Ohio	Wm. B. Duck Co.				
WJK	360	Toledo, Ohio	Service Radio Equip. Co.				
WSE	360-485	Toledo, Ohio	Marshall-Gerken Co.				
KDKA	360	Pittsburgh, Pa.	Mrs. J. J. Newlett				

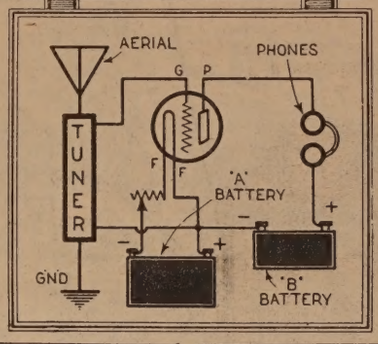
How a Vacuum Tube Operates



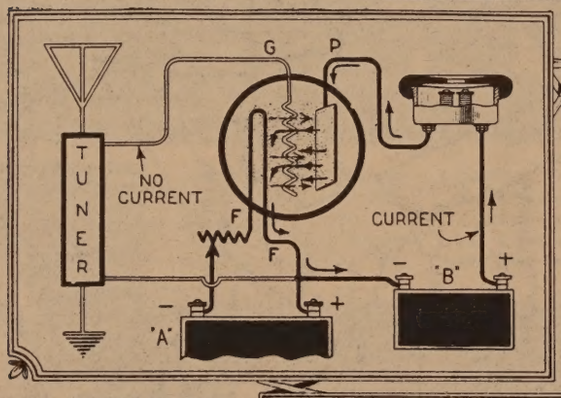


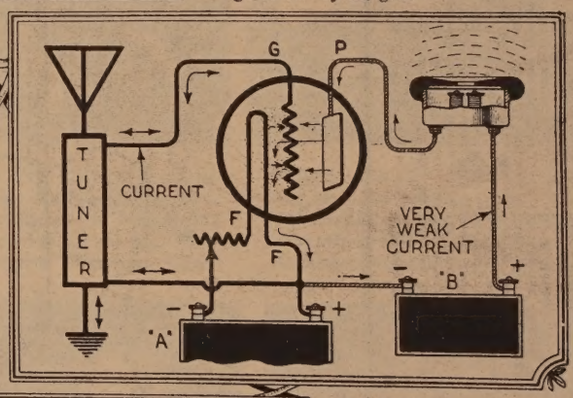


VERY few of those interested in radio reception in the usual way are thoroughly familiar with what goes on inside of a vacuum tube. A majority of the sets in general use today employ these instruments, but they are more often than not considered to be more or less of a mystery. The illustrations and text on this page show and tell just what takes place inside of a detector tube. Before entering into this part of the description, let us note the various elements of a standard vacuum tube as illustrated in the three drawings across the top of this page. First we have the filament F, in the illustration directly above. This supplies the electrons mentioned at right.

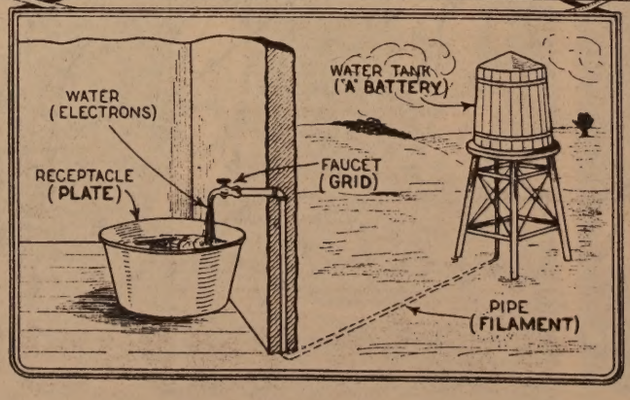


THE electrons emitted by the filament are the conveying medium in a vacuum tube and make it possible for a current to pass in one direction through the tube, but not in the other. The other two elements of a vacuum tube are the grid, G, shown in the center illustration above and the plate, P, shown directly above. The grid might be called the controlling element and the plate the receptacle for the electrons thrown off by the filament when it is heated by the current supplied by the "A" battery. The circuit for a vacuum tube is shown in a simplified way at the left. The "A" battery lights the filament, the "B" battery actuates the phones when it is "triggered off" by the grid.



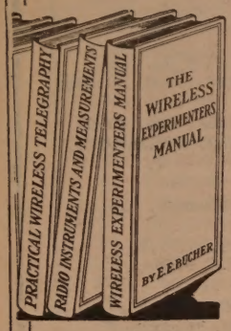


A GENERAL discussion of vacuum tube action follows. Note illustration above. No current is flowing from the tuner to the grid as no signal is being received by the aerial. Therefore, the "B" battery current flows through the phones, attracting the diaphragm. This current flows along the electronic stream set up by the filament. When current flows to grid as at the right of the above illustration, the grid becomes charged and attracts or repels some of the electrons so that many do not reach the plate.



WHEN the grid becomes charged, the current in the plate circuit is weakened, and changes rapidly; the diaphragm of the phone gives off sounds.

Left: An analogy of the operation of a vacuum tube. As the faucet (grid) is controlled, the flow of water (electrons) may be made faster or slower as desired. We only have to imagine a current flowing along this stream of water to see that it will be strengthened and weakened in accordance with the flow of water. ABNER J. GELULA.



Books for the Radio COLLECTOR

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6. PRACTICAL WIRELESS TELEGRAPHY, 1918, Bucher, loose back, water-stained cover, $10.00
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22. Same as bove, has hole through back, $7.00
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25. Same as above
30. RADIO PHONE RECEIVING, 1922, Hausmann, Hazeltine, Morecoroft, teal, Illustrated, $8.00
35. STORAGE BATTERIES SIMPLIFIED, Page, 1919,$4.00
36. PRIMARY AND STORAGE BATTERIES, Lincoln,'45,$4.00
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TELEGRAPH

42. THE A B C OF VACUUM TUBES IN RADIO RECEPTION, 1922 Lewis, excellent illustrations, stained cover, $8.00
43. RADIO UP TO THE MINUTE, Nilson, 1929, 319p, $4.
44. RADIO FOR THE MILLIONS, Popular Science, '43,$4.
45. WIRELESS TELEGRAPHY, Stanley, 1918, $8.00
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47. MICROWAVE TRANSMISSION DESIGN DATA, '44, $2.00
48. RADIO MANUAL, For the in struction of Midshipmen, 1934 edition, $5.00
49. PREPARING FOR FEDERAL RADIO OPERATOR EXAMINATIONS, Arnold Shostak, 1948, $2.00
50. THE RADIO MANUAL, Sterling, & Kruse, 1928,$6.00
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52. Same as above, 1922, $4.00
53. ESSENTIALS OF RADIO, Armed Forces, 1948, $2.00
54. NAVAL ELECTRICIANS' TEXT BOOK, VOL I, and VOL II, Practical, WHG Bullard, 1917, both books, $8.00
55. Navy Training Courses, Instructions, RADIOMAN 1c and Chief Radioman, 1940, $2.00
56. THE THERMIONIC VACUUM TUBE, and its application, 1st edition, 1920, 391 pages, $7.00
57. FUNDAMENTALS OF RADIO, Frederick E. Terman, '38,$10.
58. SOooo YoU'RE GOING ON THE AIR, and Speech Primer, 1934, $2.00
59. Bibliotheque Pratique de l'Electricien, TELEGRAPHIE, Paris, Dunod, 1898, well illustrated but you had better be ready for de french, $20.00
60. OFFICIAL POSTAL AND TELEGRAPH GUIDE, Philippine Islands, April 1, 1919, paper back, $3.00
61. RAILWAY AND COMMERCIAL TELEGRAPHY, 4th Edition, 1905, very much like "Telegraph Instructor" by Dodge, but this one is by Meyer, $15.00
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74. TELEPHONE COMMUNICATION SYSTEMS, Kloeffler, '25,$5.
75. BOSTON A Guide Book, including telephone landmarks in and near Boston, by telephone pioneers,'28,$3.
76. A B C of the TELEPHONE, Homans, 1904, $14.00
77. A B C OF THE TELEPHONE, 1901, $15.00
78. CYCLOPEDIA OF TELEPHONY AND TELEGRAPHY, Four (4) volume set prepared by a corps of Telephone and telegraph experts, and electrical engineers, over two thousand engravings, 1911, spine of books show useage, contents excellent, $25.00
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85. WESTINGHOUSE, Catalogue of Electrical Supplies, 1928-1930, international edition, 1170 pages, transformers, motors, meters, broadcast, insulators, generators, fans, radios, test equipment, stoves, irons, steam turbines, condensers, marine propelling equipment,lighting equipment & lights, and the list goes on and on.....very good condition, a very good book, $45.00
86. KELLOGG SWITCHBOARD AND SUPPLY COMPANY, Catalog, No #12, dial switching, switchboards, telephones, coded apparatus, piece parts, electronic products, wire transmission power m.d.f., supplies, the book is like new, $30.00
87. AMERICAN AUTOMATIC ELECTRIC SALES COMPANY, CATALOG, Telephone Supplies, Distributors for products of Automatic Elect., Catalog 5000, 200 pages, this appears to be in the early 30s', $25.00
88. BUCKEYE TELEPHONE & SUPPLY CO., Columbus, Ohio, about 60 pages of telephone equipment, binder cover, $8.00
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94. Same company, catalog 12, $5.00
95. SUTTLE EQUIPMENT CORP., Telephone office forms, plant forms., etc., 1960-61, $4.00
96. LEICH Telephone equipment and supplies, 1961, hard back cover, 309 pages, this book is in
97. like new condition, $20.00
97. KELLOGG SWITCHBOARD & SUPPLY CO., Catalog #6, cover shows some dirt and wear, contents in excellent condition, 353 pages, $20.00
98. THE TELEPHONE IN AMERICA, soft cover, 70 pages, 1939, lots of pictures, $4.00
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101. Directory, 1947, Sheboygan, including Kohler and Sheoygan Falls,Wisconsin $3.00

TELEPHONE

102. Same, but 1943, $3.00
103. Same, but 1951, $3.00 1953,1947, 1949, $3.00ea
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105. THE SHUNT EXCITED ANTENNA, Bell labs, '36, $2.00
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112. THE MIRACLE OF TALKING BY TELEPHONE, 1937, a re-print from National Geographic Magazine, excellent pictures, $3.00
113. FROM THE FAR CORNERS OF THE EARTH, an excellent boo on where the raw materials on making the telephone come from, $6.00

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114. 1936 RADIO DATA BOOK, RADIO NEWS, $2.00
115. 1946 RADIO-ELECTRONICS REFERENCE ANNUAL Hugo Gernsback, 2.00
116. SUPREME PUBLICATIONS, Service Notes, 1941, M.N. Beitman, corner off of cover, $4.00
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118. 1940 RADIO DIAGRAMS, Beitman, $4.00
119. 1941, three of these, good better and tops condition, $4, 5, 6, dollars each
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121. 1946, RADIO DIAGRAMS, Good, $4.00, exc.$5.00
122. PRACTICAL RADIO AND ELECTRONICS COURSE for home study ,vol I, Supreme Publications, 1943,$5.00
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124. Radio Industry RED BOOK Replacement Parts, Buy ers Guide, Sams, 1948, $4.00

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131. Index, for Vol XI and XII, 1941, $7.00
132. 1933 Index for Vol. 1, II, & 3., $8.00
133. 1934 Index for Vol. I, II, III, and IV, $8.00
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135. Index for Vol I through IX, $12.00
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142. MEISSNER, How to build Radio Receivers, '62,$3.
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146 CHICAGO SALVAGE STOCK STORE 1930, excellent $4.00
147 RADIO CIRCULAR CO, NY, 1936,radio,etc., $2.00
148 LAFAYETTE, 1937, radios and sound, $3.00
149. LAFAYETTE, WHOLESALE RADIO SERVICE CO'36, $2.00
150 BURSTEIN-APPLEBEE CO, two catalogs, 1964 and 65 including five suppliments, all for $4.00
151 RADOLEK RADIO, Chicago, 1937, $2.00
152 RADIO Electric Lamp & Supply, Co, 1936 STLouis$1.
153 ARROW ELECTRONICS, 1960-61 Buyers Guide, $1.00
154 EMRO RADIO, 1932, Radio Products Corp, NY, $4.00
155 EVANS RADIO, 1954, Concord NH, Ham Catalog, $2.00
156 WALTER ASHE, StLouis, 1955, $1.00
157. NEWARK RADIO AND TELEVISION, 1949, $2.00
158 LAFAYETTE-WHOLESALE RADIO SERVICE CO, NY, CHICAGO, ATLANTA, 1936, including 1955, catalog and flyer, ALL for $3.00
159 LAFAYETTE RADIO ELECTRONICS, 1962 and a 1965 Catalog, $both for $3.00
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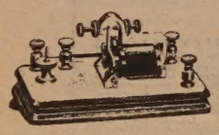

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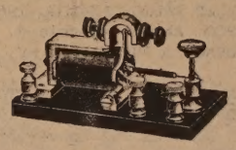

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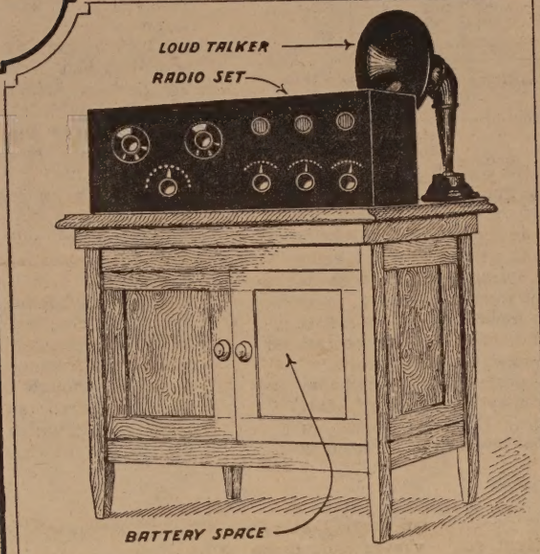
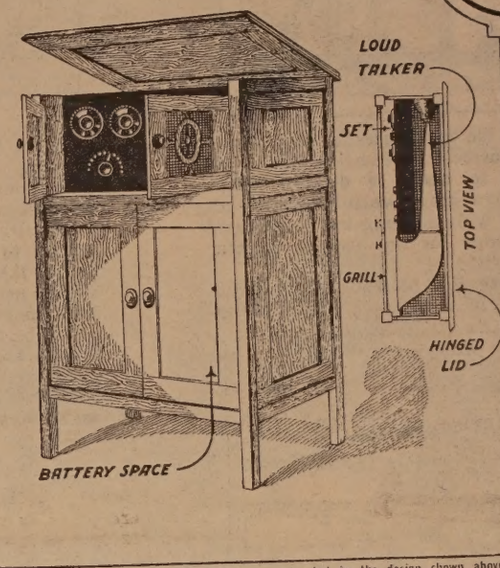
Styles of Radio Cabinets

Types of Construction That Prove Efficient

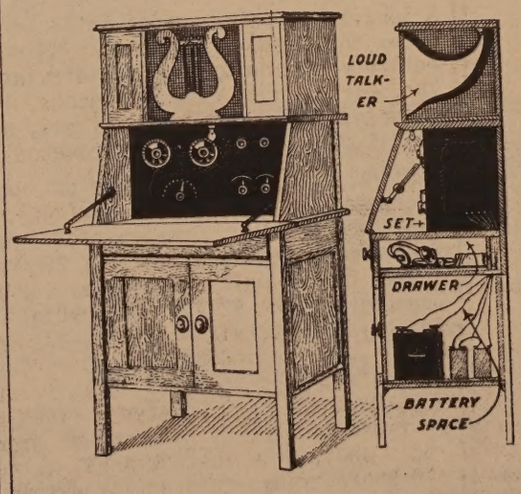
BY WILLIAM BUTTERFIELD



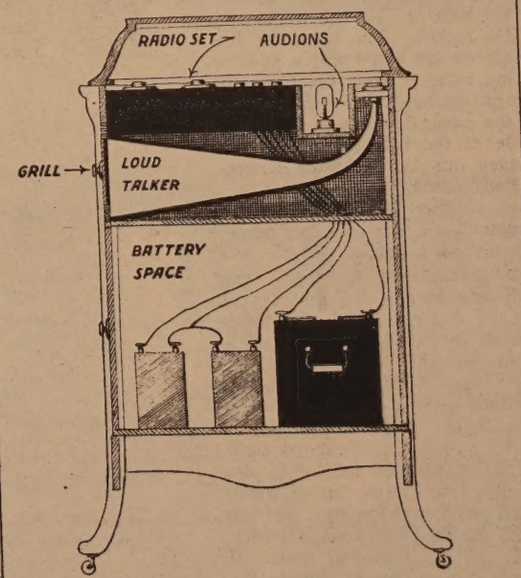
The simplest form of radio unit is the one shown above. It is a small cabinet upon which the radio set itself is placed, and in which the batteries, renewal parts and other accessories are kept. A cabinet of this type may take any one of a number of forms of construction so long as the cabinet is large enough to contain the necessary apparatus. Such a cabinet may often be found around the household.



A slightly more elaborate cabinet is one constructed in the design shown above. The loudspeaker is built in the top container together with the operating cabinet. The bottom portion is given over, as in the previous case, to housing the batteries and other necessary accessories to the operation of the set. With this type of construction all parts of the set may be reached with comparative ease in case of repairs.



A still more elaborate case for a well confirmed "Radio Fan" is the one shown here. The cabinet takes the form of a writing desk and contains several refinements, which the arrangements previously shown do not contain. Note the small light above the operating cabinet, special drawer provided for head phones and bits of apparatus, and the ample space provided for a storage battery charger in the bottom compartment.

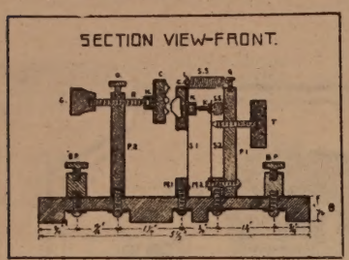


A radio set housed in a cabinet very similar to the well-known phonograph type is shown above. Some companies have commercially adopted this form and have met with no little success in selling them, tending to prove that this form of construction, aside from having exceptional acoustic properties, proves very handy to the operator. The construction is simple, and the necessary details of arrangement are shown in the sketch.

Construction of a Sensitive Wireless Detector

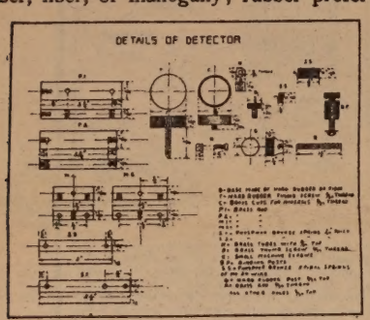
By William H. Taber.

I NOTICE that most of the simple designs of mineral detectors, sent in by amateurs, lack sensitiveness,



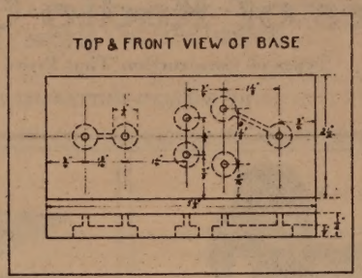
which is the most essential part of any wireless detector. Knowing this, I determined to design a detector which would have great sensitiveness of adjustment, without being too complicated or expensive for the average amateur to construct.

The base may be made of hard rubber, fiber, or mahogany; rubber preferably, as it takes a fine polish and is much the best insulator. The dimensions of the base are ½ inch thick, and 5½ by 2½ inches. The holes for the machine screws are bored with a ⅛-inch drill, taking care to space them exactly as shown on the base view. The dotted lines on the base view show where the under side of the base is to be bored and grooved out for the wire connections to the binding-posts.



Get two binding-posts, thumb screw T and knob G, all of which can be secured, made of electrose, which will match the base and look very well. The binding posts shown in the drawing are not made of electrose, and the maker must use his own judgment, as one is as good as the other except for looks. The cups C can be secured from the round carbons on dry batteries, though it is better to buy them, if possible, as near the size as shown. Next get eight inches of brass rod, ½ in. by ¼ in., cutting it into four pieces, one of which is for each of the following: 2¼ in. for P 1, 2⅛ in. for P 2, 1⅛ in. for M 1, 1½ in. for M 2. You will notice, if you add up the number of inches for each piece, that there is an extra inch to be accounted for. This is to be used in the cutting and squaring of the pieces. A rod 1¼ in. long, with an 8/32 in. thread, will be needed to fasten knob G to the cup. This can be made from a 1¼ in. brass machine screw with the head cut off.

Get a strip of phosphor bronze about 1/64 in. in thickness, 5/16 in. wide, and 5 in. long. Then cut out S 1 and S 2



with the holes as shown on the detail drawing. Now get some No. 24 phosphor bronze wire, and wind the two spiral springs SS as shown. You may have a little trouble in getting just the right tension to the springs, but as soon as you do they will work very nicely. You do not need to make tube N, as a battery knurl will answer the purpose just as well. Set-screw O can be obtained from a binding-post. Q is a small machine screw, or may be a piece of brass rod soldered into P 1. K is a small 5/16 in. brass machine screw to fit. Prosphor bronze strip S 1 may be soldered or rivited to SS. Purchase six machine screws, five of which are ½ in. long, the other being ⅝ in. with nut.

When all the parts are made and threaded, put them together as shown, and connect a wire through the groove from the machine screw in the bottom of P 2 to the binding-post. The other wire connecting the other binding post to M 2. It would be advisable to cut a piece of green felt and glue it onto the bottom of the base, so as not to scratch your table, or whatever you may have it on.

This detector is very efficient, especially when perikon is used. If you use perikon, solder the zincite crystals into the cup, without the spring movement, and the copper pyrites into the cup with the spring movement. The reason for having the cup, which contains the zincite crystals a little higher than the other, is so that the lump of copper pyrites will strike more in the centre of the zincite crystals. Of course, this detector will work excellently with silicon, molybdenite, iron pyrites, carborundum, etc., but in this case, a point must be fastened to S 1 instead of the cup. A platinum point is the best, silver next best, though brass or copper will do. If desired, all the parts may be nickel-plated, which will add a great deal to the detector's appearance.

MODERN ELECTRICS, December, 1910

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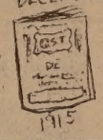

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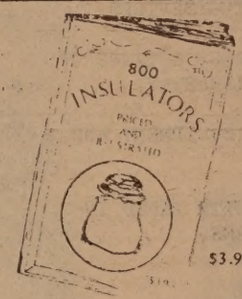

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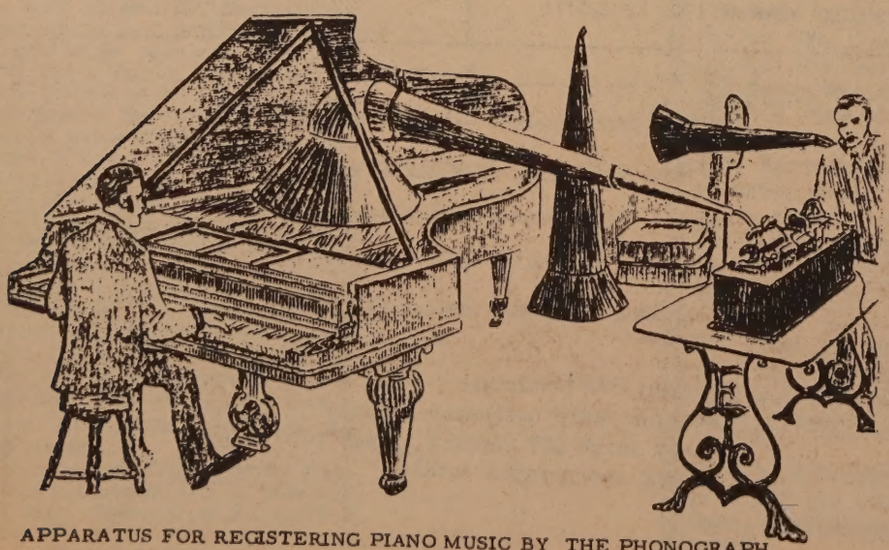

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Friendswood, Texas 77546

6.00

$6.00 only for non area members (over 150 miles from Houston, Texas)

HVRA

HOUSTON VINTAGE RADIO ASSOCIATION

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- TELEPHONES -
- TRANSMITTERS -

FOR INFORMATION CALL:

FRANK COOPER
482-6781
BILL WERZNER
721-2242

THE HVRA MEETS AT THE MUSEUM OF SCIENCE AND NATURAL HISTORY THE 3rd. TUESDAY OF EACH MONTH AT 7:30 PM — PUBLIC INVITED—

GENERAL INFORMATION: Meetings of Houston Vintage Radio Association are held at 7:30 p.m. on the third Tuesday of each month (except Dec.) in classroom # 1 of the Museum of Natural Science in Hermann Park, Houston, Texas. Dues are $12 per year. Houston Vintage Radio News is a publication of H.V.R.A. Frank Cooper is editor and publisher.

NFWA--AIRCA WIRELESS MEET AUG. 25

HELD AT:
ERIE CO. HISTORICAL SOC.
25 NOTINGHAM CT
BUFFALO, NY
RTE 198 AT ELMWOOD
over for map

ADMISSION $2

MAJ. ARMSTRONG MEET

FRIDAY EVENING

Friday evening, Aug, 24th Hospitality evening for early arrivals, held close to motel area at Larry and Dot Babcock's, 8095 Centre Lane, East Amherst, N. Y. 741-5082 (see map) See a nice collection, relax and talk with friends.

SATURDAY
HIST. SOC. BLDG.

10 AM - 1 PM

Swap meet and flea market, bring any radio or related item at least 25 years old, plenty of room, confined parking lot.

NOON - 1 PM

Enter Old Equipment Contest. Contest at this meet is for any equipment or items relating to Major Armstrong's work, regeneration, superhets, early FM, etc., Many catagories plus a Best of Show.

A lunch, cold drinks and coffee will be available in the kitchen area of the museum at noon

2-3 PM

Major Armstrong, The Man and His Work Felecia Kreuzer of Corfu N.Y. will outline the life of one of the most important men to radio history.

3-4 PM

The History of Superhetrodynes. John Caperton of Louisville KY. will give the history of the superhetrodyne invented by Major Armstrong.

4-5 PM

Award for Old Equipment Contest will be presented.

SAT. EVENING
5:30 PM

Hot Buffett and Cocktails at The Red Mug in the Williamsville Inn, 5447 Main Street Williamsville N.Y. (see map) Informal buffet right after the meet, cost about $7.25 including gratunity & tax. Drop a card to Dot Babcock, 8095 Centre Lane, E. Amherst N.Y. 14214 by August 10th if you can stay.

SUNDAY MORNING

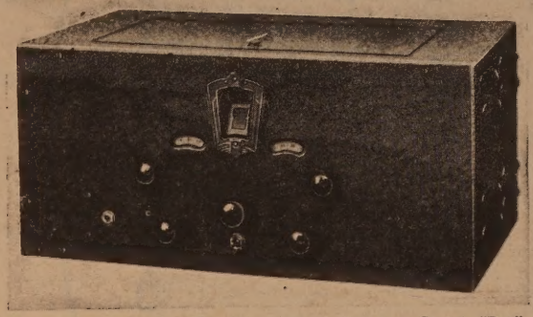
Visit and have coffee with Jim & Felix Kreuzer before you have to go home and see an excellent collection of wireless equipment. Maps available at the meet.

CLASSIC

The COMET "PRO" SUPERHETERODYNE

604

By LEWIS W. MARTIN*



Note the "professional" appearance of the new Comet "Pro" short-wave superheterodyne receiver, developed by the Hammarlund engineers.

● THE Comet "Pro" is a high-frequency superheterodyne receiver designed to meet the exacting demands of professional operators and advanced amateurs interested in the reception of both code and voice radio signals in the frequency range from 20,000 kc to 1200 kc. In addition, it is suitable for various kinds of experimental and research work involving frequencies in that range where high sensitivity, low noise level, and great selectivity are important. The rather unusual tuning system as well as several other interesting features are here described.

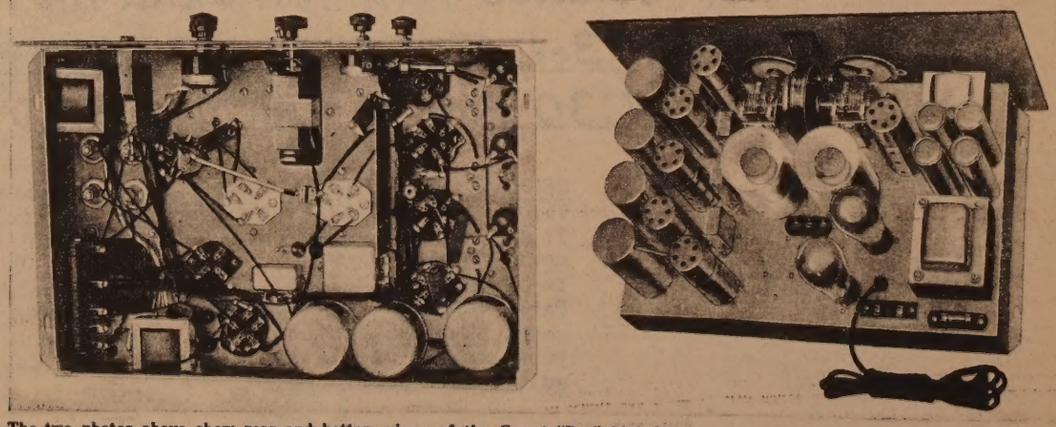
Before taking up the actual description of the receiver it may be interesting to go over some of the more important considerations involved in short-wave receiver design. First of all comes the question of power supply; shall it be batteries or alternating current? Of course this controversy is automatically answered in situations where no alternating current is available, but these relatively few cases were disregarded and complete A.C. operation decided upon. There is really no comparison from the standpoint of convenience; in fact the only argument in favor of battery operation seemed to be from the standpoint of quietness of operation which is unquestionably of paramount importance in the reception of extremely weak signals. After some experimental work even this argument was disproved, as it was found perfectly possible to build an all A.C. receiver just as quiet in operation as the finest battery-operated receivers.

Next come selectivity and sensitivity, which while separate and distinct qualities in themselves, are nevertheless dependent on each other in most practical receiver designs. The superheterodyne, or double detection type of receiver, undoubtedly offers outstanding advantages in the matter of selectivity and sensitivity, especially where such a wide range of signal frequencies must be covered. Then once again the question of noise was raised—all superheterodynes were considered too noisy for satisfactory weak signal reception. But experimental work also disproved this theory and so work was started in earnest on an A.C. operated superheterodyne. An intermediate frequency of 465 kc was chosen as a compromise. It is below the broadcast band, and at the same time is high enough to provide a large spread between a desired signal and its "image" interference. By using Litz wound intermediate coils the selectivity and sensitivity are kept high. This and many other design features are described in more detail in the following paragraphs.

Tests on the final model were exceptionally gratifying. The selectivity is such that the over-all response curve averages only 30 kc wide at 10,000 times input. The sensitivity is so high and the receiver noise level so low that, under test in a prominent laboratory it was found possible to read a C.W. code signal at twenty words per minute (single transmission) when the input to the receiver was only 1/10 micro-volt. The signal was fed from a signal generator through a 200 ohm resistor to the "Ant" and "Gnd" terminals of the receiver. Dividing this figure by four gives a value of 1/40 micro-volt per meter (assuming an effective antenna height of four meters) which is the generally accepted measure of signal field-strength. A complete description of the receiver follows.

General Description

Interchangeable plug-in coils are used to shift from one frequency range to another. Two coils, one OSC and one W.L. constitute a set, and the tuning condensers are of such size that each set of coils covers a frequency range of approximately two to one. To provide ample overlap four sets of coils are used to cover the range from 15 to 250 meters. The coils are wound on extruded Isolantite forms 1½" in diameter. This results in high electrical efficiency and also great mechanical stability, which aids materially in maintaining dial calibrations. The coils plug into special extruded Isolantite sockets with double grip clips which make contact to opposite sides of each coil prong, insuring reliable electrical connection with consequent freedom from noise due to variations in contact resistance. Any variation in resistance at these coil terminals would modulate the incoming signal carrier. Since these coil terminals are really the input to the receiver, any modulation at this point would be amplified by all succeeding stages resulting in serious noise in the output circuit. For this reason all switches or other sources of variable contact resistance



The two photos above show rear and bottom views of the Comet "Pro" high-frequency "superhet." Plug-in coils of the latest type, wound on Isolantite forms, are used. C.W. code reception is provided for, as well as phone.

One of the outstanding high-frequency superheterodyne receivers of the year is the Hammarlund Comet "Pro" here illustrated and described. The editors have been able to obtain the coil data for this set and this is the first time that this has been published. The Comet "Pro" tunes over a frequency range extending from 1.2 to 20 megacycles. This high-class short-wave receiver, intended for commercial, high-class amateur and general S-W listening stations, possesses several outstanding features such as "band-spread" tuning, extreme selectivity, high-power output and a special oscillator for the reception of C. W. signals.

have been avoided in the design of this receiver. Both OSC and W.L. coils are completely shielded in separate shield cans. The covers of these shields are readily removable to facilitate changing from one frequency range to another. The use of these coil shields eliminates all electro-magnetic coupling between OSC and W.L. coils as well as direct pickup from stray fields of any kind.

"Band-Spread" Feature

The arrangement of the tuning condensers is interesting and unique. The fundamental circuit is shown in Fig. 1, and although designed primarily to give a band-spreading action on the four amateur bands of 20, 40, 80, and 160 meters, the same effect is obtainable throughout the entire range from 15-250 meters (20,000 to 1200 kc). Condensers C1, of 138 mmf. each, constitute *tank* condensers and are individually controlled by separate vernier dials, one at left center and one at right center of the panel. By means of these two condensers, together with the appropriate set of coils, the receiver may be tuned to any frequency within its range. After this has been done, the main tuning dial, which controls condensers C2 and C3, will provide substantially true *single control* over a relatively narrow band of frequencies. If the main dial is set at 50 when the adjustment of the two tank condensers is made, approximately half of the spread band will be above and the other half below the mean frequency determined by the choice of coils and the setting of the two tank condensers. If the main dial is at zero when the tank condensers are adjusted the entire spread band will be above that frequency. Conversely, setting the band with the main dial at 100 will throw the spread band on the lower frequency side. The dials on the two tank condensers are finely and accurately calibrated to facilitate precise logging. While calibration curves are furnished with each receiver, the operator should make an accurate calibration of his own receiver by means of standard frequency signals, certain stations known to be well controlled, etc.

This type of band spreading circuit necessarily results in a non-uniform band width at various frequencies, and this fact should be taken into consideration by the operator. At 20 megacycles the band is approximately 1500 kc wide and narrows to 300 kc wide at 10 mega-cycles (using the "AA" coils). With the "BB" coils the band width is 1000 kc at 10 mc. and 150 kc wide at 5 mc. The band spreading on these two ranges is accomplished by the 15 mmf. condensers C2 and C2, Fig. 1, on the main tuning dial. These condensers alone are inadequate for proper band width in the 5 mc. to 1.5 mc. range covered by the "CC" and "DD" coils.

*Hammarlund-Roberts, Inc.

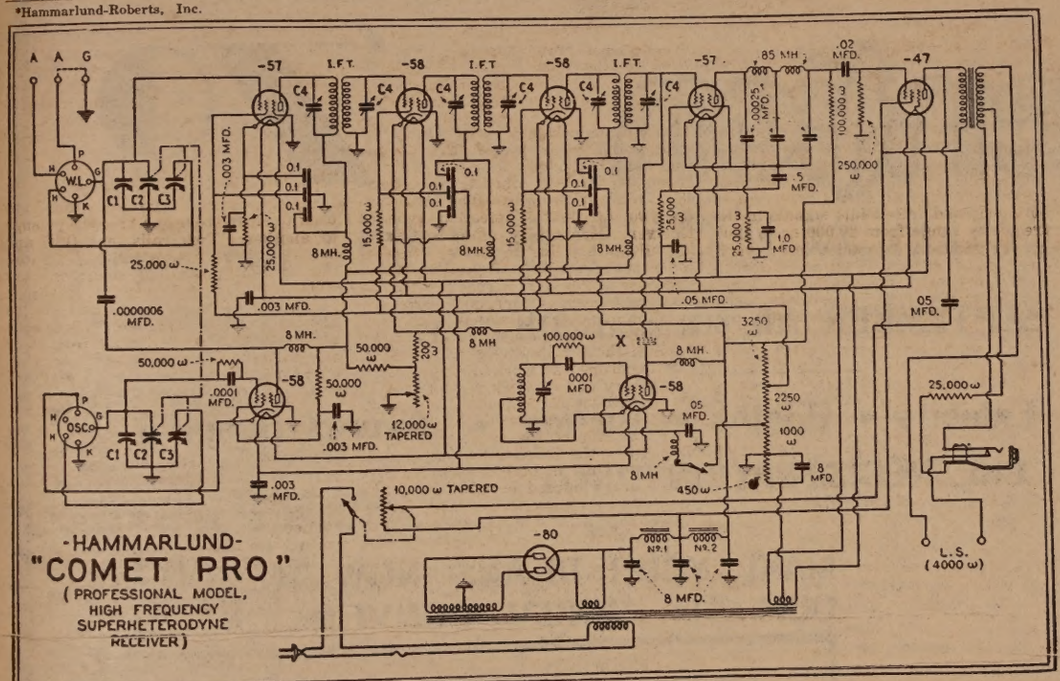


Diagram of connections as used in the latest "revised" model of the Hammarlund Comet "Pro" short-wave superheterodyne receiver. This set uses 8 tubes, including an 80 type rectifier. Fig. 1.

In this range, the 26 mmf. condensers E and F (Fig. 1) are connected into the circuit also. However, no switch is necessary, as this additional connection is automatically made when the "CC" and "DD" coils are inserted in their sockets. The fifth coil prong (which is not used in Coils "AA" and "BB") is used for this purpose in Coils "CC" and "DD." In this frequency range the band width varies from approximately 1200 kc. at 4.5 mc. to 225 kc. at 1.5 mc.

Screen Grid Pentodes as Detectors and I.F. Amplifiers

The first detector is a "57" screen grid pentode. Its high detector sensitivity and high output impedance make it highly suitable to work into the high impedance primary of the first I.F. transformer.

The two intermediate amplifying stages employ "58" variable-mu pentodes, and the intermediate coupling transformers are of the twin-coil tuned plate tuned grid type. Since the intermediate amplifier provides most of the receiver's sensitivity and selectivity, no effort has been spared in the design and construction of the intermediate transformers. The transformer coils are wound with 10/41 Litz wire and have an inductance of 1.2 millihenries. At 465 kc., these coils have a power factor of .01 or a Q of 100. They are tuned by adjustable condensers with mica dielectric and Isolantite bases. Inasmuch as six of these low loss tuned circuits are used in the three I.F. Transformers, it is not difficult to account for the extreme selectivity shown by the overall performance curves of the receiver.

The second, or I.F. detector, is also a "57," screen grid pentode operated as a plate rectifier. Since its plate circuit contains a large I.F. component in addition to the desired audio frequencies a filter is necessary to remove it, otherwise undesirable feed back would result.

High-Power Output

The output tube is a "47," resistance capacity coupled to the second or intermediate frequency detector. An output transformer as mounted underneath the chassis with its secondary connected to the speaker terminal block at the rear edge of the chassis, and is designed to operate any speaker, either magnetic or dynamic (or permanent magnet dynamic), having an input impedance of the order of 4000 ohms. A tap on the secondary of the output transformer is connected through a resistor to the jack on the front panel, thus providing head-phone reception at reduced volume and with a minimum of hum.

A very important feature of the Comet "Pro" is the intermediate oscillator, which can be started and stopped by the toggle switch on the panel. It consists of a "58" tube and associated circuits permanently adjusted to oscillate at the intermediate frequency of 465 kc. Like the high-frequency oscillator, it is also of the "electronic coupled" type.

This feature was designed primarily for the reception of pure C.W. code signals.

Comet "Pro" Tuning Condenser Data: Referring to the diagram, the tuning and oscillator variable capacitors have the following values: C1—138 mmf., C2—15 mmf., C3—26 mmf.

The trimmers across the two coils in each I.F. transformer each has 140 mmf. (max.) Each coil in the I.F. transformers has 1.2 millihenries inductance (1,200 microhenries) and are especially wound on a machine, the coils being about ⅜"x⅜" in cross-section.

The plate rectifier chokes (iron core) have about 30 henries inductance each.

The capacity X is an infinitely small capacity, equivalent to the capacity between lead wires or that between the edges of two small lugs fastened near together on the tube base.

WINDING DATA ON COILS FOR NEW COMET "PRO"

W.L. Coils (to be wound on standard forms)

Coil No.	Wavelength Range	Primary Turns	Primary Wire Size	Secondary Turns	Secondary Wire Size	T.P.I
AA W.L.	15-31	3	No. 30 DSC	7	No. 20 DSC	6
BB W.L.	28-61	3	" "	16	" "	12
CC W.L.	56-120	4	" "	29	" "	24
DD W.L.	115-250	5	" "	55	10/41 Silk Litz	56
EE W.L.	250-550	8	" "	136*	10/41-two bank, Silk Litz	

TPI equals Turns per Inch.
*The turns given are a guide only—the inductance should be 1½ or 2% greater than our present No. 5-W.L. coil.

OSC Coils (to be wound on new forms with hole for tap—these coils have no primaries).

Coil No.	Wavelength Range	Turns	Wire Size	T.P.I	
AA—OSC	15-31	7	No. 20-DSC	6	Tap at 1 2/3 turns from bottom
BB—OSC	28-61	14	" "	12	Tap at 2 2/3 turns from bottom
CC—OSC	56-120	23	" "	24	Tap at 4 2/3 turns from bottom
DD—OSC	115-250	39	28-SSC	56	Tap at 9 2/3 turns from bottom
EE—OSC	250-550	80	28-SSC	80	Tap at 16 2/3 turns from bottom

All taps to be soldered to the "P" terminal of coils CC-W.L., DD-W.L., CC-OSC and DD-OSC; coils also to have jumpers between the "G" terminal and the "H" terminal next to the "K" terminal.

Forms 1 and 7 sixteenths inch diameter

ARMSTRONG

p.m. there will be an old equipment contest for any equipment or items related to Major Armstrong's many contributions to radios.

Between 2:00 p.m. and 4:00 p.m. Felecia Kreuzer of Corfu, New York will talk about the importance of Armstrong to radio. John Caperton of Louisville, Kentucky next will give the history of the superheterodyne invented by Major Armstrong.

The winners of the contest will receive their awards between 4:00 p. m. to 5:00 p. m.

In the evening there will be a hot buffett and cocktails at The Red Mug in the Williamsville Inn in Williamsville, New York.

The meet will be held at Erie County Historical Society, 25 Notingham Ct., Buffalo, New York, Route 198 at Elmwood.

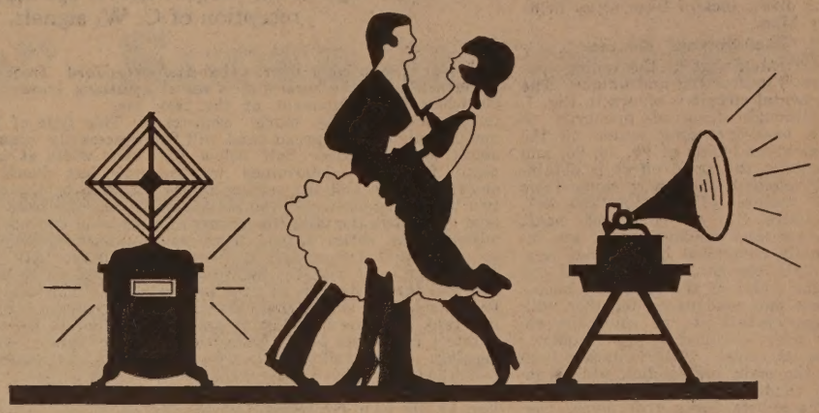
On Sunday morning there will be an opportunity to have coffee with Jim and Felecia Kreuzer and see an excellent collection of wireless equipment.

For more information on joining the club and reservations, etc., write Felecia Kreuzer, secretary, Box 68, Station H., Buffalo, New York 14214.

HERE YOU ARE GANG!

Just What You Have Been Waiting For!

THE 4TH ANNUAL



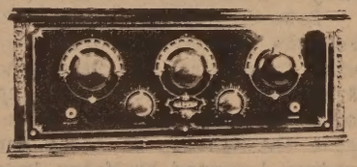
Convention '79

VINTAGE RADIO & PHONOGRAPH SOCIETY Dallas, Texas

SEPTEMBER 7th, 8th and 9th

Swapfest • Trades • Exhibits • Booths • Auction • Awards Banquet

PRE-REGISTRATION PRIZE



Pre-Registration Prize

1924 A.C. DAYTON XL-5

Pre-Register as many times as you wish for a chance at winning the 1924 receiver.

$5.00 Pre-Registration
$7.50 " "
After July 15th

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For Pre-Registration Packet, local information and accomodations write:

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IRVING, TEXAS 75062

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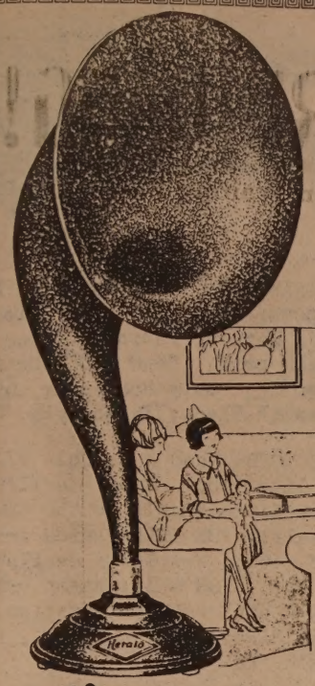

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PUBLISHERS OF P.O. BOX 28572 DALLAS TEXAS 75228

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C253 - The Raffle Ticket & The Mountainside Cabin

C254 - Kingfish Rents a Cottage & The Rehearsal Session

C255 - Kingfish, Marriage Broker & Kingfish's Rest Home

C256 - Lost On A Hillside & The Tin Box

C257 - Search for Madam Queen & Andy Buys a Race Horse

C258 - Kingfish's Job In Guam & Sapphire Leaves Kingfish

C259 - Millionaire Saved & The Husband Hunting Girl

C260 - Anniversary Gift & The Rare Nickel

C261 - The Beach Vacation & Delivering A TV Set

C217 - Christmas Special & The Adventures Of Mazie

C215 - 10,000 Broadcast (1952) & Can You Top This?

MISCELLANEOUS COMEDY

C219 - The Jimmy Durante Show & The Stan Freeberg Show

C212 - Fanny Brice/Baby Snooks & The Jack Benny Show

C055 - The Fred Allen Show & The Jack Benny Show

C220 - The Henry Morgan Show & The Red Skelton Show

C054 - Duffy's Tavern & Boston Blackie

C214 - Abbott & Costello & Corless Archer

Fibber McGee & Molly

C020 - Cat Under the Porch & Fibber's Magic Act

MYSTERY & DETECTIVE SHOWS

SUSPENSE

C092 - House In Cypress Canyon & Fugue In C Minor

C185 - Three Skeleton Key & The Burried Woman

C088 - The Invisible Ape & Case Hostory E. Lowndes

C012 - The Customers Like Murder & Death Has A Shadow

C042 - The Enormus Radio & Inner Sanctum - Hang. Island

C085 - Sorry Wrong Number & Mission Completed

C103 - The Black Door & The Crime Club

INNER SANCTUM

C082 - Girl & The Gallows & Juda's Clock

C086 - Dead Man's Deal & Musical Score

C100 - Song of The Slasher & The Wailing Wall

C196 - The Devil's Fortune & Murder Mansion

JOHNNY DOLLAR

C190 - The Wayward Gin Matter & The Latin Lovely Matter

THE SHADOW

C177 - Death Is An Artist & The Phantom Voyage

C176 - Lemont's Trick on Margo & The Werewolf

C170 - Nursery Rhyme Murders & The Creeper

C167 - The Spider Boy & Silky Reed

C041 - Mark of the Black Widow & The Ghost Walks Again

NOW! NIGHTMARES FOR SHEER ENJOYMENT

GANGBUSTERS

C150 - Blackie Thompson & The High School Hotshots

C149 - Supersonic Safecrackers & The Carnival Caper

C142 - Chicago Tunnel Gang & The Kidnaped Paymaster

C139 - Tenessee Trigger Man & The Collector

C145 - Brothers In Banditry & The Cowboy Killers

THE GREEN HORNET

C132 - The Boathouse Mystery & The Letter

C127 - Polarized Glasses & What Price Glamor?

THE WHISTLER

C073 - Death In The Air & Mirage

C193 - Double Exposure & The Tangled Web

SAM SPADE, PRIVATE DETECTIVE

C038 - The Dry Martini Caper & The Bow Window Caper

C208 & FRANKENSTEIN - (1932)
C209 excellent quality - on two cassettes!

ESCAPE

C199 - The Fourth Man & Violent Night

MR. DISTRICT ATTORNEY

C013 - Spring Feaver The Deadly Snowflake

DRAGNET

C274 - Obscene Photographs & The Narcotics Addict

MUSICAL - THE ZIGFIELD FOLLIES

C285 - The first show with Fanny Brice & James Melton

I LOVE A MYSTERY

C268,- The Thing That Cries
C269 & In The Dark
C270 three cassettes

C109,- Bury Your Dead In
C110 & Arizona (Werewolf etc.)
C111 three cassettes

C112 - Highlights from "Temple of The Vampiers"

THE LONE RANGER

C166 - Origion of Lone Ranger & Legend of Dan Reed

C035 - Alien Smugglers & The Indian Girl

SCIENCE FICTION

C064 - WAR OF THE WORLDS (1938) alarmed the nation!

X MINUS ONE

C083 - Martian Sam & How To

C087 - The Junkyard & The Seventh Order

DIMENSION X

C102 - Child's Play & The Veldt

C183 - SF-68 Jenny With Wings & The Universe

C106,- BUCK ROGERS origion and
C107 & first 12 episodes
C108 three cassettes

C276 - SUPERMAN comes to earth

C251 - OLD TIME RADIO SPECIAL: KDKA - first commercial broadcast, A. Hitler declares war on Poland, Jap attack on Pearl Harbor, F.D.R. declares war, 1937 Hindenburg disaster, exerpts from many, many famous old time radio shows!

RADIO COLLECTORS DREAM:

C078 - ATWATER KENT RADIO COMMERCIAL DEMONSTRATION & many other radio commercials.

THRILLING STORIES

WHAT JOY THEY BRING
GREAT STORIES
of thrilling ADVENTURE & ROMANCE

Rates for THE HORN SPEAKER
One year.....$5.50
Two years.....$11.00
Special rates for one year
(mailed in envelope)
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Foreign Air Mail...$16.00

mart

Classified ad rate: 6¢ per word.
Photo ads: $2.00 extra.

Deadline: 20th of the preceding month.

PHOTO ADS
ONLY
$2.00 EXTRA

FOR SALE OR TRADE

FOR SALE: LOW LOSS five tube TRF, all good parts, beautiful walnut cabinet, $75.00---Five tube Neutrodyne, all good parts, nice cabinet, $65.00---Crosley Trirdyn 3R3, good condition, beautiful cabinet, $85.00---Fada neutrodyne, five tubes, all good parts, nice cabinet, $75.00---Five tube & speaker Bosch Cruiser TRF set, single dial tuning, all good parts, $85.00---Code practice set with one tape, $25.00--Browning-Drake regenerative and one RF, all good parts, nice cabinet, $75.00--All less tubes and shipping extra.
Joe Horvath, 522 Third St., San Rafael CA 94901.

FOR SALE: Radiola VIII 6 tube superhet, "Vintage Radio", page III, excellent condition, complete with tubes, will ship for best offer.
Louis Yadevia, 601 Church La., Upper Darby PA 19082.

FOR TRADE: Breadboard or RA-DA for trade only for 1924 Zenith Super Portable, or will pay cash.
Mel Rosenthal, 507 S. Maryland Ave., Wilmington, Delaware 19804.
Phone: (302) 368-3118.

FOR SALE: SAMS SCHEMATICS 6 volumes, 11 through 70. Make offer.
Cecil - W5FJG 713 926 9236
1110 Dismuke, Houston TX 77023.

ATWATER KENT replicas, switches $10. Front plates for T11 tuners and variometers $8.50, thumb nuts 50¢, single tube socket base $5.00. Pulleys for brass belts. Zenith 3R-4R pointers, knobs large and small. Any dial, knob, push button for any radio. Write WD11 or UV99 adaptors $4.50.
K. Parry, 17557 Horace, Granada Hills CA 91344.

FOR SALE OR TRADE

FOR SALE: Telegraph relays, Signal Electric SW37. Mint in cartons $35. Several old headphones, $6.00 pair. Two Vibroplex keys, $25.00 and $35. Telegraph sounders, mint in carton $35.00. 1914 crystal radio, all factory components, $118.00. Medical magneto, works, minus one electrode, $85.00. Old wheatstone bridge, mahogany and brass, $68.00. Decode resistance box, $24.00. Research potentiometer by Rubicon, wooden case, $45.00. Setchell Carleson BC-1206-CM2 receiver, $25.00.
Following items are brand new: Small Japanese battery operated doppler radar, detects motion at 15ft. built-in and remote speaker, $68.00. Solid brass English 4½" diameter barometer, $39.00. Book, Thomas Edison Professional Inventor, $3.75. Postage please.
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FOR SALE: Standard Talking Machine Mod. A $300., no crank. Edison 1898 suitcase type standard, plate IV Tinfoil to Stereo, with original adjustable reproducer and 3 ft. solid brass horn, excellent $450.
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FOR SALE: 1926-48 reproduced schematics. Alignment procedures available free. T.V. schematics also available. Quick quality over night service. Send $2.00 each to:
J. S. Antaki, Antakamatics, 311 Bear Ridge Rd., Pleasantville NY 10570.

FOR SALE: Due to lack of space in the city I have to sell my collection of horn, cone, etc. speakers. Also a few D.C. sets, several restored cathedrals, and early consol & table phonographs. Plus restored player piano and 60 rolls. You arrange P/U & shipping. D. Dexter, CBS RSS, 51W 52 St., New York NY 10019 or call 212 226-4885 evenings till 12 or weekends.
Also lots of A.C. & D.C. tubes, 2 early airplane props, large wooden.

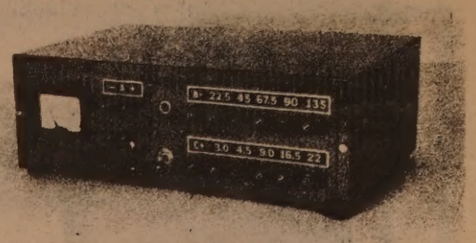
FOR SALE: A few duplicate 5 tube TRF battery receivers, list SASE. Also new UX-30 and VT-24/864 tubes $4. each or six for $20. plus $1.50 shipping. WA4NED, Box 2478, Gainesville GA 30501.

FOR SALE OR TRADE: Atwater Kent parts 1927 - 1930, technical help, early electrics specialists.
Vintage Radio Shop, 1419 - 8th St., Rockford IL 61104.
Telephone: 815 964 3221.....

RIDERS Vols. 1-4 abridged, 9-13. Sell or trade for Vols, 14 on.
R. Astaff, 244 Fowler Ave., San Francisco CA 94127.

SALE: Radios, speakers, test equipment. SASE. Rosenthal, 507 S. Maryland Ave., Wilmington DE 19804.

FOR SALE OR TRADE



FOR SALE: Solid State "A", "B" and "C" power supply for operation of 1920's battery radios. Price $109.50 postage paid. Send SASE for information to: Gary Schneider, 6848 Commonwealth Blvd., Parma Hgts, OH 44130.

COLLECTORS: Need a Radiola 17 or 18 dial lite hood? Complete illustrated instructions enable you to make it yourself. FOR SALE radios and related items. New lists available June 1st. SASE & 15¢ stamp brings lists & dial hood information.
Franklin Haas, 207 W. 30th., Hutchinson KS 67501.

FOR SALE: National SW3 (DC) 1st Mdl, very good 3 coils only $75.
Setchell Carlson "Radio-Dor-A-Fone" 1939 wood box set (Broadcast band plus intercom). Model 421RD. Excellent $20.
Ghirardi's "Radio Trouble Shooters Handbook", last revised Ed. 1943, 744 pages, excellent $20.
H. L. Hasbrouck, 616 Bay St., Santa Monica CA 90405.

FOR SALE: Collector liquidating entire collection of battery/AC radios, TVs, horn & cone speakers, Old radio & wireless parts, N.O.S. and used tubes, literature & misc. See display ad elswhere in this HORN SPEAKER issue..
H. Burke, 1201 Happy Hollow, Plattsmouth NB 68048..

FOR SALE: Radiola 20, $90.00, looks good; American Beauty, table model, 3 knob, battery T.R.F., $65.00, works. Frank Cooper, 4215 Ravine Drive, Friendswood TX 77546.

FOR SALE: Radios, speakers, tubes, magazines, test equipment, parts, list 3M79 50¢ plus large SASE with 2-15¢ stamps. Krantz, 100 Osage Ave., Somerdale N.J. 08083. ..

FOR SALE: Olde Tyme Radios all in good working condition with good cabinets. General Electric model 522....$65.00. General Motors Cathedral model 211....$65.00. Crosley "Victory Radio" WWII vintage $35.00. Shipping for any other above additional. Order from: Olde Tyme Radio Co., 2445 Lyttonsville Rd., Silver Spring MD 20910.

FOR SALE: Atwater-Kent breadboard parts catalog reprint. (8 pages, 1923). Sent postage paid for $2.00.
G. B. Schneider, 6848 Commonwealth Blvd., Parma Hgts. OH 44130...

FOR SALE OR TRADE

FOR SALE: AK Model 84, above $325 or trade. AK #67 $40.; AK #20 $135.; Stewart Warner $40.; Majestic $40.; Zenith Wavemagnet $40.; RCA battery set $30.; 1933 Philco $75.; Clarion Cathedral $45.; UACC Cathedral $55.; Telefunkin Rough case $20.; 5TP4 Projection tube $50.; Silvertone wire recorder radio $85.; 10" Motorola TV $85.; More old TVs, more radios, send $1.00 for list. Chuck, 925 Starlite, Grants Pass, Oregon 97526, Everything as found. WANTED: Outside horn phonographs. Phone (503) 476-1078.

FOR SALE: "Edison and His Inventions", printed 1879, contains illustrations and diagrams, book is in good condition. Also lithograph button of Edison 15/16" dia. in very good condition, commemorating Edisons 100th birthday 1847-1947. Best offer for both items.
Herman Fothe, 10 Jackson St., Sloatsburg N.Y. 10974.

FOR TRADE: Eagle Neutrodyne B, Browning Drake 5R, Freed Eisemann FE-18-5, Radiodyne WC-10, AK 49, Grebe Synchrophase no case, all for one or two earlier or rarer sets. Smith, 4522 Boynton Pl., Madison Wis. 53714. Ph: (608) 241-4942.

BACK ISSUES

All 10 back issues for 1973...$8.00
Single issues...$1.00 each
All 10 back issues for 1974...$6.00
Single issues...$.75 each
All 10 back issues for 1975...$5.00
Single issues...$.75 each
All 10 back issues for 1976...$5.00
Single issues...$.75 each
All 10 back issues for 1977...$5.00
Single issue...$.75 each
All 10 back issues for 1978...$5.00
Single issue...$.75 each
Any single issue of 1979...$.75 each

The Horn Speaker

P.O. Box 53012 Dallas, Texas 75253

FOR SALE OR TRADE

FOR SALE: We now have it in stock. 6-conductor Atwater Kent style battery cable - brown cotton sheath. Conductors insulated with cotton and rubber and color coded. Cost is $1.00 per foot.
4-conductor Atwater Kent style battery cable - same as above, cost 75¢ a foot.
175KC IF transformers $2.50 each
[illegible]KC osc coils 2.00 each
IF & ant. coils 2.00 each
8 uf @ 450 screw base caps $2.00 ea.
T-1 tubes (gold tips) 10.00 ea.
[illegible]A tubes 10.00 ea.
Any tubes from 12's or 50's
new $2.50
used 1.50
Plus shipping; Order from:
Olde Tyme Radio Co., 2445 Lyttonsville Rd., Silver Spring MD 20910.

FOR SALE: Cathedral, battery and AC radios from 1920's and 1930's. Please send large envelope with two stamps.
J. Albert Warren, Box 279, Church St., Waverly PA 18471.....

FOR SALE: Diamond needles for any phonograph. $5.00 each postpaid. Send make and model number of phonograph and old needle if possible. Keith Electronics, 209 Bellefonte Ave., Lock Haven PA 17745...

FOR SALE NEW TUBES: BH Rectifier $8.; 205 (VT2) Bakelite base $15.; 211C (VT4C) $20.; 215A (VT5) $12.; 231D (Exact replacement for UX199 or UX120) $12. Walter Smartt, 124 Mitchell Dr., Lookout Mountain TN 37350. Phone: 615 821-6953 8pm to 11pm.

FOR SALE OR TRADE: Magnavox, WE 14-A, amps; spark transmitter; horns; etc. SASE for list. Jim Collings, 3201 Westchester, Abilene TX 79606.

FOR SALE: Old Radios, speakers, etc. Sale or trade. SASE. Rosenthal, 507 S. Maryland Ave., Wilmington DE 19804.

FOR SALE OR TRADE: No. 1, 2 and 3 QST magazines and Edison Home Phonograph - will trade for antique radio gear. Also Fleming Valve. Paul Giganti, 2429 San Carlos Ave., San Carlos CA 94070.

FOR SALE: Battery and A/C sets, horns and speakers, few mags and books, some test equipment. SASE for list. A. Patscheck, Box 195, Wimbledon N.D. 58492.

FOR SALE: Paper condensers; .00025, .0005, .001, .002, .003, .004, .02, .04, .06 at 600V, $1.00 per dozen. Daniel Gaidosz, 342 West River Rd., Orange CT 06477.

FOR SALE OR TRADE

FOR SALE - NEW AUDIO INTERSTAGE TRANSFORMERS, Universal replacement; For Single or Push-Pull plates to Single or Push-Pull grids. Taps available for 1;1.5, 1;3 and 1;6 turns ratio. $6.25 each, 2/$12. or 4/$22. Add for [illegible] 0.9 pounds p[illegible]
OLD STYLE C[illegible]
18-gauge AC line cord in go[illegible] brown: 20¢/ft or 16¢/ft for 100' or more. OK to mix colors to get 100' price. (Also have various types single conductor wire). Add $1.50 shipping.
NEW CR[illegible] PARTS: Crystal holder + arm [illegible] $1. Gal[illegible]stal 75¢. Cat's whiskers 3/$1. Jamestock clips 12/$1. Phone tips 12/$1. Add 75¢ shipping.
SASE for more info + wire samples. Robert Goodman, 7943 Ponce, Canoga Park CA 91304.

FOR SALE: Relatively new electrolytic capacitors for AC radio set restoration. Send SASE for list to: G. B. Schneider, 6848 Commonwealth Blvd., Parma Hgts., Ohio 44130...

FOR SALE: Large SASE for 2-page list of radios, tubes, horn drivers, TV coils, other odds and ends. Supercedes previous list. John Bayusik, 311 Grandview Ave., Hamden, Conn. 06514.

WANTED

WANTED: Philco model 90 Cathedral in good restorable condition. Want power supply cover for AK 40. Want wiper arm and good transformer for Radiola III. Gene Densmore, 2125 Cambridge Drive, Tallahassee, FL 32304. Phone; 904 576-2125....

WANTED: AK 19, 21, 32, 36, 50 and other AKs. Need complete power supply for AK 37. Neutrowound sets and literature on same.
Jimmy Edington, 1018 South Spooner, Pasadena TX 77506. (713) 472-3453....

WANTED: Grebe CR05 or Syncrophase tube socket and filament rheostat with thumbwheel. Will buy any parts available. Contact S. Wolf, 15 Soldiers Field Place, Boston MA 02135. Phone: (617) 787-2800..

QST's WANTED 1939 thru 1962 complete or partial. Must be in good condition with covers. Also need 1920 thru 1922. Write: WA5YXA, 6621 Duffield, Dallas TX 75248...

WANTED TO BUY: Early electrics and cathedrals (non-working). Contact: Vintage Radio Shop, 1419- 8th St., Rockford IL 61104. Phone: 815 964 3221.....

WANTED: National SW-3 to complete Old Tyme Ham Station. Norman A. Parsons (WB1BVO), 22 Forest St., Branford CT 06405...

WANTED

WANTED: Crosley "Harko Signor" or "Ace" 1 tube 1922 or 23? Like a model "50" but little longer case in good or better condition. Information to: Troy Cantrell, 331 North Stine Road, Bakersfield, California 93309.

CATHEDRALS WANTED: Restorable AC sets. Also the following in working or restorable condition: Edison R4 radio, Edison radio/phono models C1, C2, C3 and C4 (consoles), Radiola III amp and Models II, 20, 24 and 26, Zenith 3R and 4R, AK Bread Boards (particularly 5 and 9) DeForest D7, 10 and 12. Please send price and description. Also looking for RADIO NEWS, Mar., July and Sept. 1926.
Pat O'Hern, Box 55456, Houston, Texas 77055.

WANTED: Automotive Radios and parts. Town and Country and Wonderbar radios, vacuum tube types, hybred types. Motorola, Ford models 69MS, 79MS. Chevrolet Wonderbar, model 3706551, etc. Vibrators 6 volt, 4 prong and 5 prong must be new, D & M products switches, SP #1, 4, 5, 6, 8, Motorola 40A536283 vacuum operated auto radio antennas. Knobs etc. Prompt cash payment. Marvin Roth, 14500 LaBelle, Oak Park MI 48237. Phone 313 399-5993..

WANTED: Speaker that will work on 1926-27 Stromberg Carlson 641-A, table model.
George Friedrick, Route 1, Custer, Wis. 54423.

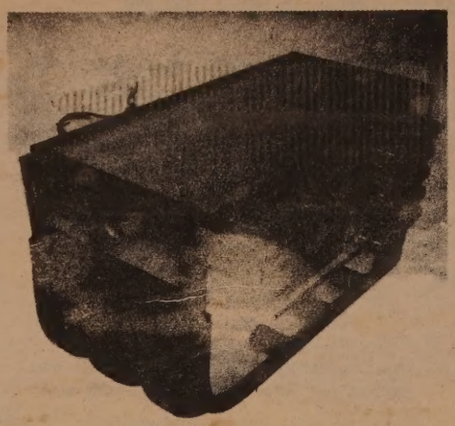
WANTED: 1940 RCA Victor Radio-Phonograph combination model V-201, Radio tube #886 screw in type base.
David Galanek, 111 Eastwood Rd., Bridgeport CT 06606.

WANTED: Any Pathe' early electric set, especially with Kellogg tubes, also a Colonial Globe AC set, any Marti set and early ceiling and table fans.
Richard Cane, 8391 N.W. 21st. St., Sunrise FL 33322.

WANTED: Radio broadcast equipment, RCA OP-5 WE 22 Field amplifiers, microphones WE carbon 600-A, 630, 633, Dinamic, 639 Cardioid, 618-A Dinamic. RCA condenser, 44-BX ribbon. Remler condensed.
Ralph Maddox, Purgitsville W. VA 26852..

WANTED: Grebe CR-5 or Synchrophase tube socket and filament rheostat with thumbwheel. Will buy any parts available. Contact S. Wolf, 15 Soldiers Field Place, Boston, Main 02135. Phone: 617 787-2800..

WANTED



WANTED - DEAD OR ALIVE: "The Mirrored Gang." Leaders; The Radio Brothers - Mr. Table and Mr. Floor Model. Other known members of the gang: Doc Clock and Wiley Picture Frame. Discription: Reliable witnesses have reported this gang operating with many disguises. Their known colors are blue, green and peach. They have appeared in various shapes: round, rectangular and kidney. They have been know to carry chrome and wood accessories. REWARD. Contact Barbara, Box 1252, Main Office, Dayton, Ohio 45401. (513) 253-5073 eves.

WANTED: One (1) working power supply used in Atwater Kent models 40, 42, 44, 52. Will swap my Radiola 25 with ant.(Beautiful) for a Philco Cathedral model #90.
Bob Westrick, 1733F Champlain Drive, Baltimore MD 21207. Phone (301) 265-8570.

WANTED: Magazines Short Wave Craft from No. 1, then Radio and Television. Complete years. Pre W.W. II radio catalogs. Quote prices. F3WL, 25 Avenue Nicolás Deux, 78600, MAISONS-LAFFITTE, France.

WANTED: Old broadcast mikes, any shape. Any 16 electrical transcriptions from library or syndicated services. Old WE and RCA vertical/lateral pickups.
Cisler, Box 1644, Louisville KY 40201.

WANTED: Old TV sets, pre 1951 black and whites and early color sets. Especially wanted; RCA color set, model CT100 and Motorola T5903, also Airking color set from 1951.
Richard Bozeman, 6006 N. Hale Ave., Tampa FL 33614.

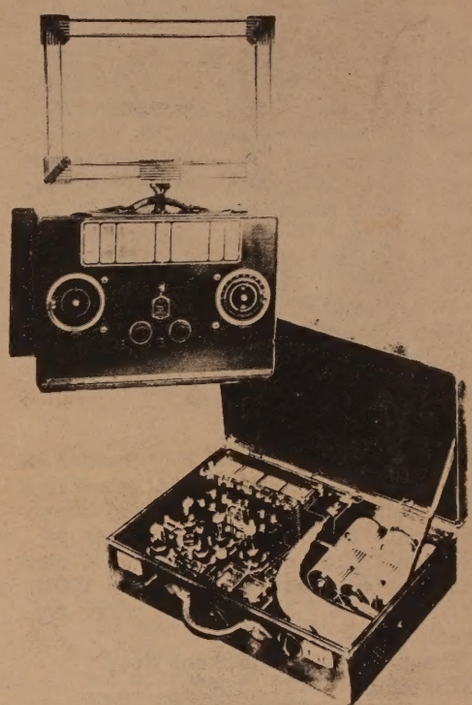
WANTED: 1933 Emerson Mickey Mouse radio. Write or call collect. Les Sims, 5551 W. Lover's Lane, Dallas TX 75209. Ph: 214 352-9757.

WANTED: Always buying car radios, parts and literature of the 30s, 40s and 50s. Please price and describe. Especially wanted, Ford 1930s models. Cash paid. Marvin Roth, 14500 LaBelle, Oak Park MI 48237.

WANTED

WANTED: Reliable specialists want to buy early horn phonographs (Zonophone, Queen Busy Bee, Victor, Edison, Talkophone, Graphophone etc.) and pre-1924 radios (DeForest, Grebe, Kennedy, Tuska, Atwater Kent, Radiola etc). Rapid payment and confidentiality assured. Please describe and price. 1 item or 100. MUSIQUE, 129 Howell St., Canandaigua N.Y. 14424.

WANTED: Western-Electric microphones; 639 (Birdcage), 633 (Saltshaker), or Eightball. E. D. McDonald, 922 Tanglevine, Dallas TX 75238.



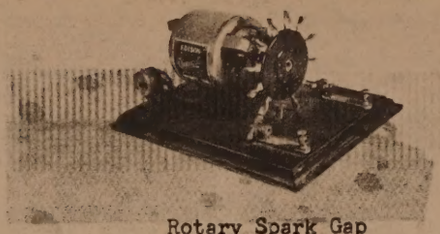
WANTED: Suitcase portables from 1920s, especially Zenith, Radiola 24, Kodel, Kemper and the like. Send description & price to: Rosenthal, 507 S. Maryland Ave., Wilm., Dela. 19804.

WANTED: Horn type phonographs that need repairing, or part machines, most any makes.
Reproducers for Edison, Victor. Brass name plates from old machines. Old candlestick telephones in repairable condition, not rusted. Paying resale prices.
Coleman Kiss, 4723-48 Ave, Wetaskiwin, Alta, Canada T9A 0M5
Phone: 403 352-4760..

WANTED: Radios 1927 to 1941, speakers, old phonographs with outside horns. Highest prices paid. They do not have to work.
Everything Audio, 16756 N.E. 4 Court, North Miami Beach FL 33162....

WANTED: Philco 90B Cathedral and Atwater Kent 80 Cathedral. Also need one small knob for Philco 20B.
Charles Green, 3309-24, Great Bend KS 67530....

Spark Equipment



Rotary Spark Gap

Spark Transmitter

Detector Boxes

Goose Neck Socket

Responder

Rocking Chair Rectifier

Spark Coil

DeForest 5 Interpanel

DeForest Tube

WANTED

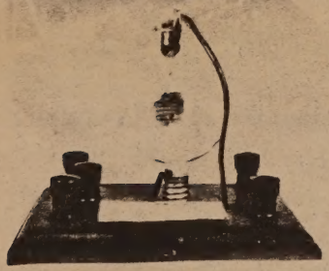
DeForest HR

DV 6A DL 9

Old Detectors

Radios

Spark Tunning Coil



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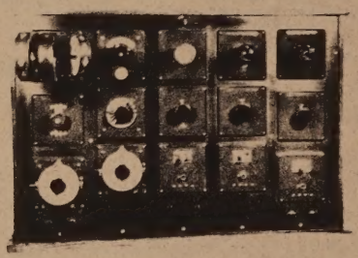

Tubes

DeForest Singer

DeForest Spherical Audion

204 with Spherical Center

De Coherer

DeForest 15 Panel

Grebe CR-1-CR-2

Amrad 5 Tube

DeForest Tubular Audion with DF on plate

Grebe CR-5-RORK-RORA

Magazines; First issue of RADIO Magazines

First issue of PLAYBOY

Old catalogues such as DUCK, IE, MESCO, MIGNON,

DEFOREST, MURDOCK, CLAPP EASTHAM, etc.

Send discription condition and price with first letter and photo if possible.
Dean Almandinger, 84 W Muriel St., Orlando FL 32806.

PUETT ELECTRONICS

PUBLISHERS OF P.O. BOX 28572 DALLAS TEXAS 75228

ANTIQUE RADIO TOPICS & THE CLASSIC RADIO NEWSLETTER

LIST No. 18

how to order: (1) Make all checks or money orders payable to PUETT ELECTRONICS. All payments must be in U.S. funds and negotiable without payment of a bank collection fee. Money orders issued by post offices in certain countries (Canada for example) are acceptable if they can be cashed in a U.S. post office.

(2) ALL ITEMS ARE POSTPAID AND ALL SHIPMENTS ARE INSURED when ordered at the prices listed herein (in list No. 18) or in our new catalog No. 18. The scarcity of many antique radio tube types and the increasing cost of paper and printing has made it necessary for us to increase the prices of many items which we regularly stock. We will, however, accept orders from our obsolete price list No. 17 and catalog No. 17 until 30 April 1979. Customers who order from the obsolete list No. 17 or catalog No. 17 must include postage, handling & insurance charges as instructed in the obsolete list or catalog.

(3) TEXAS RESIDENTS ADD 5% STATE SALES TAX.

IN A HURRY! You may call J. W. F. Puett at his residence from 9:00 AM to 10:00 PM Central Standard or Central Standard Daylight Time. We will be glad to help you with free technical consultation 214 - 321-0927 or 327-8721.

NOW! JUST OUT!! ANTIQUE RADIO CATALOG No. 18 - - - **EVERYTHING FOR ANTIQUE RADIO RESTORATION**

APPROXIMATELY 800 DIFFERENT TUBE TYPES IN STOCK!!
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HERE ARE A FEW OF THE 800 DIFFERENT TYPES OFFERED IN OUR CATALOG No. 18. ALL TUBES ARE GUARANTEED. SEE OUR POLICY STATED IN CATALOG.

				6J7	$5	7A6	$5	24A	$6
				6K5	$4	7A7	$5	25L6	$4
				6K6	$4	7A8	$5	25Z5	$4
		2A6	$5	6K7	$5	7B5	$4	25Z6	$4
		3Q5	$4	6K8	$5	7B6	$5	26	$7
0D3	$3	3V4	$4	6L5	$5	7B7	$5	27	$5
0Z4	$4	5AZ4	$6	6L6	$4	7B8	$5	30	$6
1A7	$4	5U4	$3	6L7	$5	7C5	$4	32	$5
1H5	$4	5Y3	$4	6Q7	$5	7C6	$5	34	$5
1L6	$9	5Y4	$4	6SA7	$4	7C7	$5	35	$5
1LA6	$5	5Z3	$4	6SB7	$4	7F8	$7	35A5	$5
1LB4	$5	6A7	$7	6SC7	$4	7G7	$5	35L6	$4
1LD5	$5	6A8	$5	6SG7	$5	7H7	$5	35W4	$4
1LE3	$5	6C5	$4	6SJ7	$4	7Y4	$5	35Y4	$5
1LN5	$5	6C6	$5	6SK7	$4	10	$8	35Z5	$4
1N5	$5	6D6 WE	$5	6SL7	$4	12A7	$5	36	$5
1R5	$3	6E5	$8	6SQ7	$4	12AT6	$3	37	$5
1U4	$4	6F5	$5	6U5	$8	12AV6	$3	38	$4
1U5	$4	6F6	$6	6U7	$6	12B7	$5	39	$4
1V	$6	6G5	$8	6V6	$3	12BA6	$3	40	$8
2A3	$8	6H6	$3	6X5	$3	12BE6	$3	41	$5
2A5	$5	6J5	$4	7A5	$4	12K7	$5	42	$5
						12Q7	$5	43	$5
						12A57	$4	44	$4
						12SG7	$4	45	$7
						12SK7	$4	46	$5
						12SQ7	$4	47	$8
						14A7	$5	50	$8

50A5	$4	
50B5	$4	
50C5	$4	
50L6	$4	
51	$5	
55	$6	
56	$4	
57	$4	
58	$5	
70L7	$6	
71A	$8	
75	$5	
76	$4	
77	$5	
78	$5	
79	$5	
80	$4	
81	$7	
83V	$4	
84	$4	
85	$5	
89	$5	
117L7	$6	
117Z3	$4	
117Z6	$5	

BOOKS, BOOKLETS, LISTS & DATA

Booklets listed in (1) thru (5) below are $2. each, 3 for $5., 4 for $6. or 5 for $7.

(1) The Acquisition Of Antique Radios by J. W. F. Puett
(2) The Complete Restoration of Battery Powered Antique Radios by J. W. F. Puett
(3) The Complete Restoration of AC Powered Antique Radios by J. W. F. Puett
(4) When Was That Old Tube Made? by James R. Wilkins
(5) Antique Radio Tube Substitution by J. W. F. Puett

(6) SILVER GHOSTS by J. W. F. Puett (history of E. H. Scott) $8.95
(7) THE CLASSIC RADIO COLLECTORS HANDBOOK by J. W. F. Puett $10.00
(8) THE APPRAISAL OF ANTIQUE RADIOS by J. W. F. Puett $4.95
(9) The Antique Radio Services List (dealers and service organizations all over the U.S.A. who can help an antique radio collector) $2.00
(10) The PUETT ELECTRONICS Super Antenna - Ground System Plans $2.00
(11) Cross Reference List of Military vs. Commercial Tube Type Numbers $1.00

SCHEMATIC DIAGRAMS

WE HAVE SCHEMATICS FOR NEARLY ANY ANTIQUE RADIO RECEIVER! Send name of manufacturer & model number of set - $1.50 postpaid. Without name of mfg. and/or model No. we will search our files for $3.00, but we must have a sketch of top of chassis showing type numbers and location of all tubes and location of front panel & dial.

APPRAISAL

WE OFFER THOROUGHLY DOCUMENTED APPRAISALS FOR INSURANCE PURPOSES. Many insurance companies offer special antique insurance policies which cover items which have been properly appraised. Send one 15¢ stamp for our appraisal brochure and a sample copy of our form.

ANTIQUE RADIO TOPICS & THE CLASSIC RADIO NEWSLETTER

IT IS OUR PLEASURE TO BE ABLE TO CONTINUE ANTIQUE RADIO TOPICS WHICH WAS FOUNDED IN 1970 BY AN ALL TIME GREAT IN OUR HOBBY, JAMES A. FRED.

We have combined our two publications, THE CLASSIC RADIO NEWSLETTER and The Antique Radio New Acquisitions List with Antique Radio Topics. This means that you can receive all three at the same subscription rate -- $5.00 per year for ten issues!

SEND FOUR 15¢ STAMPS FOR A SAMPLE ISSUE

JUNE JULY AUGUST 75c

THE HORN SPEAKER

1979

Mr. Lee A. Davis
20102 No. Topps Hwy.
Sumner WA 98390